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ABSTRACT

As part of a project dealing with personnel training requirements for vocational educators who serve handicapped students, this investigation identified the training needs of both vocational teachers and teacher educators. According to the final report of this phase of the project, input was solicited from both vocational teachers and vocational teacher educators in the 50 states and Puerto Rico. Two national needs assessment surveys were used to identify the training needs with little difference found in the perceived training needs of vocational education teachers and vocational teacher educators. Top priorities assigned to training needs were derived from the knowledge, rather than the competency statements on the 96-item survey. The majority of these needs related to assessment of students and interpretation of the results; characteristics and capabilities of students; job placement; and legislative requirements. The greatest training need perceived by the teachers was how to interpret the reports of other professionals. Teacher educators identified long-range planning needs, using appropriate materials and determining appropriate student performance as priority needs; the highest need perceived by the teacher educators was orienting potential employers of handicapped students. It was concluded that the 96-item survey was a reliable document for surveying training needs of vocational education personnel working with handicapped students, and that future teacher education programs should be based on the findings of this and similar surveys. (KC)

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Final Report

Project No. 498MH00009 BOAE 0020
Contract No. 300-80-0865

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT

NEEDS FOR WORKING WITH THE HANDICAPPED

by

Kay E. Kienast and Bill E. Lovelace

Educational Innovators, Inc.
P. O. Box 2736
Richardson, Texas 75080

September, 1981

The research reported herein was performed pursuant to a contract with the Office of Education. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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FOREWORD

Within the last few years it has been established that handicapped school-age children have the same rights as nonhandicapped students to a free, public, equal educational opportunity. The principle source of this right has been a large number of State and Federal court orders based on two major premises: first, handicapped persons can learn and profit from training and education; and second, techniques and technologies exist which are believed to be appropriate for training and educating the handicapped. These premises have been transformed into legal doctrines by court decisions which state that excluding handicapped persons from school violates their rights to education under State constitutions, the equal protection clause of the 14th Amendment, or the due process clauses of the 5th and 14th Amendments.

Therefore access to vocational education programs has become improved for the handicapped. However, a critical void presently exists for the preparation and professional improvement of vocational teachers instructing mainstreamed, handicapped students. This void has been identified as the lack of a data base which determines the specific unmet training needs of vocational instructors who serve or will be serving handicapped students.

As a result of this need, two related but separate projects were funded by the U. S. Department of Education. Contract, Number 300-70-0571 was awarded to Educational Personnel Development Consortium D of Richardson, Texas for the period from 1978 through 1979 to: 1) identify the unique competencies and knowledges needed by vocational instructors to work with handicapped students; and 2) develop three questionnaires for use in conducting a National Needs Assessment Survey. The three questionnaires which were developed and approved under the Federal Reports Act and Office of Management and Budget were:

1. Vocational Teacher Needs Assessment to Serve Handicapped Populations;
2. Vocational Administrator Needs Assessment To Serve Handicapped Populations; and
3. Vocational Teacher Educator Needs Assessment to Serve Handicapped Populations.

States choosing to replicate the study may use any one or all three of the above questionnaires which are included in the Appendices of this report.

The second project was conducted by Educational Innovators, Inc. of Richardson, Texas under Contract Number 300-80-0865 from 1980 through 1981 for the purpose of: 1) conducting a national needs assessment survey of vocational teachers and vocational teacher educators; and 2) disseminating the results and products of the needs assessment survey. The data base developed as a result of this study should enable managers at the Federal, State, institutional, and local levels of vocational education to plan, design, secure funding, and implement effective vocational personnel development activities thereby increasing the effectiveness of vocational instructors to meet the needs of handicapped students.

Bill E. Lovelace
Project Director

Kay E. Kienast
Project Facilitator

ACKNOWLEDGEMENTS

This study involved a number of individuals to whom Educational Innovators, Inc. is extremely grateful. The study would not have been possible had the Vocational Education Personnel Development (VEPD) Coordinators within each of the 50 State Departments of Education and Puerto Rico not provided the names and addresses for the sample populations. Further the VEPD Coordinators assisted in the follow-up activities as needed.

Special credit goes to the members of the Advisory Committees who assisted in the development of the National Needs Assessment Survey. The Vocational-Technical Advisory Committee members included the following:

Dr. Rose Mary Bengal
Vocational Education Personnel
Development Coordinator
State Department of Education
Baltimore, Maryland

***Dr. Zed DeVaughan**
Assistant State Director
Oklahoma State Department of
Vocational and Technical Education
Stillwater, Oklahoma

Dr. Maude Goldston
Vocational Education Personnel
Development Coordinator
State Department of Education
Richmond, Virginia

***Dr. Marion B. W. Holmes**
Director, Vocational Education
Division of Career Education
The School District of
Philadelphia, Pennsylvania

***Dr. J. Russell Kruppa**
Professor and Chair of the
Industrial Arts Department
Division of Industrial Education
and Technology
Trenton State College
Trenton, New Jersey

***Dr. Orville Nelson**
Co-Director, Center for
Vocational and Adult Education
University of Wisconsin, Stout
Menomie, Wisconsin

Mr. Richard Round
Albuquerque Technical-Vocational
Institution
Albuquerque, New Mexico

Mr. Pablo Pena
Auto Body Instructor
Burbank High School
San Antonio, Texas

***Dr. Richard C. Weber**
Chair, Vocational Department
South Lafourche High School
Larose, Louisiana

The Special Education Advisory Committee members were:

***Mr. Miles Beachboard**
Director, Vocational Special
Needs Programs
Department of Secondary Education
State Department of Education
Jefferson City, Missouri

Dr. Richard N. Jensen
Director of Vocational Education
Special Needs Inservice
Rutgers University
Middlebush, New Jersey

Mrs. Francis Black
Vocational Homemaking Instructor
Arkansas School for the Deaf
Little Rock, Arkansas

Mr. Jimmy Daniels
Vocational Education for the
Handicapped Instructor
Congress Junior High School
Denton, Texas

Mr. Raymond Faucette
State Supervisor of Vocational
Special Needs Programs
State Department of Education
Little Rock, Arkansas

Mr. Louis Glover
Director of Special Education
Region X Education Service Center
Richardon, Texas

***Dr. Allen A. Mori**
Associate Professor
Department of Special Education
University of Nevada
Las Vegas, Nevada

***Mr. Fred Shaw**
District Director of Adult and
Community Education
Key West, Florida

***Mrs. C. J. Ollee Washington**
Program Supervisor Special Needs
Division of Vocational-Technical
and Adult Education Services
Olympia, Washington

Those members who assisted in conducting the National Needs Assessment Survey and in the data analysis which was done under separate contract are identified with the symbol *.

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Chapter 1

INTRODUCTION

Within the last few years it has been established that handicapped school-age children have the same rights as nonhandicapped students to a free, public, equal educational opportunity. The principle source of this right has been a large number of State and Federal court orders based on two major premises: first, handicapped persons can learn and profit from training and education; and second, techniques and technologies exist which are believed to be appropriate for training and educating the handicapped student.

These premises have been transformed into legal doctrines by court decisions which state that excluding handicapped persons from school violates their rights to education under State constitutions, the equal protection clause of the 14th Amendment, or the due process clauses of the 5th and 14th Amendments. Accordingly, courts have ordered that (The Council for Exceptional Children, 1977):

1. No handicapped child may be excluded from education because of his/her handicap--the "zero reject" principle;
2. Schools have a duty to provide an equal educational opportunity to all handicapped students--the "mandatory education" principle;
3. The preferred educational placement of handicapped students is in the least restrictive environment--the "mainstream" belief;
4. The handicapped person is entitled to education or training that is appropriate to his/her needs and conditions and is designed to help him/her achieve the fullest potential--the "appropriate education" principle; and

5. The child, his/her parents, and guardian or a person acting as a parent are entitled to a hearing on any proposed special education placement before the placement is made--the "procedural due process" requirement.

Although litigation is the principle enforcer of this right, it is not the sole source. Federal and State legislation also provides for the right to a public education for handicapped persons. This legislation often requires schools to comply with the principles of zero reject, mandatory education, placement in the least restrictive program, appropriate education, and procedural due process; for example, the emphasis of Section 504 of the Rehabilitation Act of 1973, P.L. 94-112; and the Vocational Amendments of 1976, P.L. 94-482, which amended the Vocational Act of 1963. The regulation (45 CFR Part 104.303) implementing P.L. 94-482 specifically declares the training of handicapped students as "National priority programs" (Federal Register, Vol. 42, No. 191, Monday, October 3, 1977).

As a result of both litigation and Federal and State legislation, efforts have begun to deinstitutionalize the retarded, mentally ill, and other handicapped individuals and provide them supportive services in the community. Parent groups have demanded the educational services for their handicapped children and the courts and lawmakers have responded. Consumer groups of disabled persons have been increasingly vocal in affecting those programs designed to help, and researchers and practitioners have been discovering untapped productive potential in even the most severely handicapped.

The discovery of human potential is not the same, however, as fulfillment of that potential. Handicapped persons have many artificial barriers placed in front of them that impede their participation as full and productive citizens. Frank Bowe (1978), Executive Director of the American Coalition of Citizens with Disabilities writes:

> Today, disabled people seek very basic rights. They want a place to live - and cannot find it. They want an education - and are turned away. They seek access to transportation on buses and subways - and cannot get in. They seek jobs - and are rejected. They desire respect - and receive humiliation.

All this, emphasizes Dr. Bowe, handicaps not only the disabled individuals themselves but handicaps all of us, our whole society. However, Dr. Bowe also states that "America need not be handicapping nor need it be handicapped."

However in order to become independent the handicapped must be employed. A part of the solution to the needs of handicapped individuals then is the provision of adequate vocational training that will allow them to become productively employed. The need is great. Bowe (1978) reports that 60 percent of all handicapped adults are at or near the poverty line. Levitan and Taggart (1976) report that only 40 percent of all disabled adults are employed compared with 74 percent of the nonhandicapped population. Shworles (1976) estimated that by the end of 1977 around 2 million handicapped persons would leave schools with inadequate skills for participation in the work force. Handicapped persons are often underemployed, working in jobs below their capabilities.

In response to this great need, vocational educators have attempted to mainstream handicapped students in keeping with P.L. 94-482. However, recent and continued evaluation of vocational education programs as underserving handicapped persons (General Accounting Office, 1974) underline the need for increased attention on discovering methods of providing effective vocational training for disabled students. Comprehensive vocational education emphasizes the need for handicapped students to become the responsibility of the regular vocational instructor with support from special education staff as needed by the student. In order to meet this need, the vocational instructor must provide sequential educational instruction and training appropriate to the needs and progress of each handicapped student. Consequently, the vocational instructor must not only have the competencies, knowledges, and technical skills needed to be effective in the

vocational skill area, but must also possess specific competencies and knowledges which will enable him or her to effectively teach handicapped students.

STATEMENT OF THE PROBLEM

The major purpose of this study was to develop a data base that identified the need for professional improvement and/or preparation of vocational education instructional personnel teaching handicapped students via a National Needs Assessment Survey. The two specific project objectives included the following:

1. To establish a data base which identified the specific unmet training instructional needs of personnel who serve or will be serving handicapped students; and
2. To disseminate the results and products of the needs assessment survey.

SIGNIFICANCE OF STUDY

The identification of specific training needs of vocational teachers who teach or will be teaching handicapped students is essential for the well-being of both students and teachers. Flynn, Gacka, and Sundean (Research Notes, Phi Delta Kappan, April, 1978) conducted a survey in Pennsylvania of 1,726 regular classroom teachers who were asked if they felt adequately prepared to teach mainstreamed, handicapped students. Fifty-eight percent of these teachers said that they did not feel adequately prepared. Although this was not a survey of vocational teachers, one could assume that their attitude would be very similar. Similarly, a study was completed by Dr. George W. Fair in 1976 of all school districts in Texas with special education or vocational education programs. A survey instrument asked directors of special education and directors of vocational education, "If the Texas Education Agency could provide your school district with some kind of assistance in order for you to serve more special education students in regular vocational programs, what kind of assistance would be most needed?"

Fair (1976) reported that inservice education was the response to this question and recommended the following in the study entitled Vocational Education Programming for Special Education Students in Texas:

> (7) That an intensive inservice education program on vocational education programming for special education students for vocational education personnel, special education personnel, and administrators be initiated.... Such an inservice program would include the assurance that each vocational education teacher participate in a minimum of 15 hours of instruction on the education of special education students in regular education programs.

There is no doubt that the legislation and judicial decisions existing today have focused vocational educators on the problems of educating students with special needs. However, many problems still exist in the field in general, especially in the field of teacher preparation according to Jennings, Haynie, and Yung (1978). Jennings, Haynie, and Yung (1978) stated that:

> Vocational education teachers with no special education background are teaching special needs students, and special education teachers with no background in vocational education are trying to prepare these same types of students for employment. This situation exists in public schools because there are virtually no teacher education programs to prepare people with both types of skills.

Therefore a critical void exists for vocational teachers of handicapped students. This void is the lack of professional preparation provided through organized courses in vocational teacher education institutions. There is an obvious need for the development of strategies and instructional content to be utilized to further prepare vocational teachers instructing handicapped students, and to provide inservice training for persons presently employed as vocational teachers of the handicapped.

Further, it is imperative that the vocational teacher's own perception of the importance of tasks to be mastered and the knowledge required become part of the content of the preparation program. Therefore, current vocational teachers of handicapped students should identify the criterion for development of the preparation curriculum. In summary, the complete analysis of an occupation must

include: 1) an identification of tasks performed and knowledges needed; and 2) the relative importance of each task performed and knowledge needed by the incumbent workers.

Research previously completed identified the competencies and knowledges needed by teachers for effectively conducting vocational programs. However, those unique competencies and knowledges needed by vocational teachers instructing handicapped students have just recently been determined as a result of a project funded by the Department of Education in 1979 entitled "Personnel Training Requirements To Serve Handicapped Populations," contract number 300-70-0571. Until these unique competencies and knowledges had been identified, it was virtually impossible to develop teacher training courses based on competencies and knowledges. Therefore, the training and improvement needs of vocational teachers related to students with special needs have been vague and often unidentifiable, if existent.

METHOD OF PROCEDURE

A. Personnel Training Requirements To Serve Handicapped Populations, Contract 300-07-0571

A National Needs Assessment Survey was the procedure utilized in this study to identify the training needs of vocational instructors of mainstreamed, handicapped students. Three questionnaires were developed:

1. Needs Assessment Survey of Vocational Teachers;
2. Needs Assessment Survey of Vocational Teacher Educators; and
3. Needs Assessment Survey of Vocational Administrators

These questionnaires were developed by extracting two sets of competencies and knowledges from a review of literature concerning: 1) those needed for conducting vocational instructional programs excluding technical skills; and 2) those that would assist vocational education instructors in assuring that handicapped students have equal access and opportunity in vocational education programs. One

set of competencies and knowledges was reviewed by a nine-member Vocational Technical Advisory Committee; while the second was reviewed by a nine-member Advisory Committee composed by special educators and vocational educators responsible for handicapped students using the Delphi technique.

Representatives of the Vocational Technical Advisory Committee were:

Dr. Zed DeVaughan
Assistant State Director
Oklahoma State Department of Vocational and
Technical Education
Stillwater, Oklahoma

Dr. Maude Goldston
Vocational Education Personnel Development Coordinator
State Board for Vocational Education
State Department of Education
Richmond, Virginia

Dr. Rose Mary Bengal
Vocational Education Personnel Development Coordinator
State Department of Education
Baltimore, Maryland

Mr. Richard Round
Albuquerque Technical-Vocational Institution
Albuquerque, New Mexico

Dr. J. Russell Kruppa
Professor and Chair of Industrial Arts
Division of Industrial Education
and Technology
Trenton State College
Trenton, New Jersey

Dr. Orville Nelson
Co-Director
Center for Vocational, Technical, and Adult Education
University of Wisconsin, Stout
Menomie, Wisconsin

Dr. Marion B. Holmes
Director
Vocational Education
Division of Career Education
The School District of Philadelphia
Philadelphia, Pennsylvania

Dr. Richard C. Weber
Chairperson Vocational Department
South Lafourche High School
Larose, Louisiana

Mr. Pablo Pena
Auto Body Instructor
Burbank High School
San Antonio, Texas.

Representatives of the Advisory Committee composed of educators and vocational

educators responsible for handicapped students included:

Ms. Carlene Ollee Washington
Program Supervisor
Special Needs Division of Vocational-Technical and
Adult Education
Olympia, Washington

Mr. Louis Glover
Director of Special Education
Region X Education Service Center
Richardson, Texas

Mr. Raymond Faucette
State Supervisor of Vocational Special Needs Programs
State Department of Education
Little Rock, Arkansas

Mr. Miles Beachboard
Director
Vocational Special Needs Programs
Department of Elementary and Secondary Education
State Department of Education
Jefferson City, Missouri

Dr. Richard N. Jenson
Director of Vocational Education
Special Needs Inservice
Rutgers University
Middlebush, New Jersey

Dr. Allen A. Mori
Associate Professor
Department of Special Education
University of Nevada, Las Vegas
Las Vegas, Nevada

Mr. Jimmy Daniels
Vocational Education for the Handicapped Instructor
Congress Junior High School
Denton, Texas

Ms. Frances Black
Vocational Homemaking Instructor
Arkansas School for the Deaf
Little Rock, Arkansas.

A discrepancy profile was then prepared by comparing the two sets of competencies and knowledges. Therefore the discrepancy profile identified the unique competencies and knowledges necessary for vocational teachers to instruct handicapped students. These unique competencies and knowledges were used as the basis for the three questionnaires that were developed. These three questionnaires were identical and intended for three populations--vocational teachers, teacher educators, and administrators. However, only two populations were approved by the Federal Education Data Committee/Office of Management and Budget to respond to the questionnaire. These two populations were vocational teachers and teacher educators.

B. Vocational Education Personnel Development Needs For Working With The Handicapped, Contract 300-80-0865

A second, separate contract was awarded to conduct the National Needs Assessment Surveys previously developed. The sample population for this study was limited to: 1) vocational teachers of State approved, less-than-baccalaureate degree, vocational education programs; and 2) vocational teacher educators. All fifty states and Puerto Rico provided the names and addresses for the study using a proportional, stratified, random sample. A total of 1,446 vocational teachers and 206 vocational teacher educators were mailed the National Needs Assessment Survey. The total sample per vocational program area for teachers is shown in Table 1. Table 2 provides the total sample per vocational program area for teacher educators.

TABLE 1
Usable responses of vocational teachers

Program Area	Number surveys mailed	Number usable returns	Percent returned
Agriculture	98	44	45
Office	298	133	45
Distributive	116	51	44
Health	126	46	37
Homemaking	297	152	51
Trade and Industrial	430	163	38
Technical	81	33	41
Totals	1,446	622	43

TABLE 2
Usable responses of vocational teacher educators

Program Area	Number surveys mailed	Number usable returns	Percent returned
Agriculture	15	10	67
Office	43	22	51
Distributive	14	8	57
Health	15	3	20
Homemaking	51	35	69
Trade and Industrial	55	38	70
Technical	13	7	54
Totals	206	123	60

DEFINITIONS

Competencies, general occupational, in this study were defined as those skills, concepts, and attitudes needed by all workers regardless of their occupations or specific jobs (Carter V. Good, Editor, 1973:121).

Knowledge, recall, in this study, was considered to be knowledge defined in terms of itself and voluntarily remembered and used whenever the need arises (Carter V. Good, Editor, 1973:L 325).

Task, in this study, was defined as a performance standard providing a clear specification of what is to be done; why, when, and where it is to be done; how it is to be done; by whom it is to be done; and to what extent or degree of perfection it is to be done (Department of the Air Force, 1970:2).

Handicapped students, in this study meant persons who were: 1) mentally retarded; 2) hard of hearing; 3) deaf; 4) speech impaired; 5) visually handicapped; 6) seriously emotionally disturbed; or other health impaired person, or persons with specific learning disabilities, and who by reason of the above: 1) required special education and related services; 2) could not succeed in the regular vocational education program without special educational assistance; or 3) required a modified vocational education program (Federal Register, Vol. 42, No. 191, Monday, October 3, 1977).

Vocational Education, in this study, was organized education programs which were directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree (P.L. 94-482, Sec. 195(1)).

Vocational program, in this study, was a planned sequence of courses, services or other educational activities designed to meet a specific vocational objective(s) (National Center for Educational Statistics/Vocational Education Data System documentation).

DESCRIPTION OF INSTRUMENT

The National Needs Assessment Survey, found in Appendix A, consisted of the unique competencies and knowledges identified as needed by vocational teachers who instruct or will be instructing handicapped students. One section of the survey contained 65 competency statements while the second section consisted of 31 knowledge statements. Therefore questions 1 through 65 were competency statements on the survey; questions 66 through 96 were knowledge statements. Solely for the purpose of organization, the competencies as well as the knowledges were grouped into teacher functions. These [illegible] teacher functions included: 1) professional role and development, 2) student guidance, 3) school/community relations, 4) instructional implementation, 5) program management, 6) instructional planning,

7) evaluation, and 8) student organization. No attempt was made during this study to justify the selection of these eight teacher functions nor to justify the inclusion of any competency or knowledge statement within a specific function.

The Needs Assessment Survey required vocational teachers to rank each competency and knowledge statement from one (low) to five (high) concerning their present level of competency or knowledge development. Each respondent was also asked to rank their desired level of development by circling a number on a scale from one (low) to five (high). Circling number 3 indicated that the respondent had an average level of development to perform the competency or knowledge. Circling any other number (2, 4) indicated respective decreasing of increasing performance or knowledge development levels.

Vocational teacher educators completed a survey identical to the one completed by vocational teachers as shown in Apendix B. However the vocational teacher educators were asked to identify the extent the competencies and knowledges were presently developed in their teacher education program. The difference between present and desired level of development was converted to a need index. The need index was then adjusted by the magnitude of the desire as indicated by the respondent, thus giving a priority ranking for the competency or knowledge statement. In this manner the training needs were identified as well as the priorities for training.

The survey for vocational administrators, although not used in this study, is shown in Appendix C. Because this survey was approved by the Federal Education Data Committee/Office of Management and Budget, it can be used at State and local levels to identify the training needs of vocational administrators.

TREATMENT OF DATA

The Needs Assessment Surveys were designed to provide a discrepany analysis between the present level of competency and knowledge development of respondents

as compared to the desired development level of respondents. Additionally, a rank order as to the priorities for training needs was determined. A computer program previously designed and tested for reliability showed per competency and knowledge statement a need index. The difference between present level of development was subtracted from the desired level of development to obtain the need index. For example, if on competency or knowledge statement one, a person ranked their present level of development as two with their desired level of development as four, the data analysis would list a need index of two for the statement. The need index was adjusted by the magnitude of the respondents identified desired performance level. For example, if a need index of two was computed with the desired development level as four, then the adjusted need index would be two times four, or eight. Therefore, the maximum adjusted need index would be two while the minimum need index would be zero. By means of the adjusted need index all of the competency and knowledge statements were prioritized providing a list that respondents felt were the greatest needs for further training. The adjusted need index was presented for each competency and knowledge statement for each group: 1) vocational teachers; 2) teacher educators; and 3) vocational program areas--agriculture, distributive education, health, home economics, office, technical, and trade and industrial. The adjusted need index for all groups was weighed for the difference in number of responses in each group. This overall need index gave equal weight to each group. This type of data treatment provided the inspector with information about the mean of the present development level rating and the mean of the desired rating on each competency and knowledge statement for each group, and the combined rating or weighted need index across all groups.

The frequency and percent for both the present performance ability and the desired performance level was reported for each vocational program area.

Additionally the mean and standard deviation were calculated for each competency and knowledge statement.

SUMMARY

This investigation identified the training needs of both vocational teachers and teacher educators in order for instruction to be provided to mainstreamed, handicapped students. Input was solicited from both vocational teachers and vocational teacher educators in the 50 States and Puerto Rico. Two National Needs Assessment Surveys were the method employed to identify the training needs.

Chapter 2 deals with a review of literature concerning competencies and knowledges necessary for instruction for vocational teachers as well as vocational teachers of handicapped students. Additionally skills needed to work with handicapped students are reported for the areas of vocational rehabilitation and special education personnel. Chapter 3 provides methodology information. An analysis of the data is provided in Chapter 4. Within this chapter are tables indicating the statistical data collected. Conclusions drawn from the data are presented in Chapter 5. Included are recommendations related to further studies and implementation of the findings.

Chapter 2

REVIEW OF LITERATURE

A prime factor in facilitating the training and education of handicapped individuals is developing teachers who have the necessary skills to teach disabled persons. One acceptable teaching mode raised the mastery of competencies and knowledges demonstrating the needed skills. The following pages review efforts by vocational educators to identify needed teacher skills or competencies and knowledges. This occurs in two major sections. First, competencies needed by vocational educators in general are summarized. This is followed by a comprehensive review of the literature concerning skills that vocational educators must have to train handicapped persons.

A. Competencies and Knowledges Required by Vocational Teachers

Vocational education teacher training has been emphasized beginning with the Smith-Hughes Act. Federal guidelines have mandated training programs for vocational educators distinct from other teacher education programs, and until the passage of the Vocational Education Act of 1963 required separate teacher education programs in each of the vocational program areas. In the 1970's a new distinction emerged between the training needs of vocational teachers in secondary schools and vocational-technical teachers in postsecondary schools (Lovelace, 1975).

In recent years performance or competency-based teacher education has received increasing emphasis. Cooper and Weber (1973) define competency-based education as a program that "specifies the competencies to be demonstrated by the student, makes explicit the criteria to be applied in assessing the students' competencies, and holds the student accountable for meeting those criteria." Competency-based education emphasizes the acquisition of performance skills or competencies to do a certain job as opposed to an emphasis on acquisition of a

certain body of knowledge and completion of a specified number of college hours or years of study (Houston, 1974, b). Competency-based teacher education has influenced many areas of teacher education and has been considered an important reform of traditional teacher education techniques (Lovelace, 1975).

The identification and validation of competencies and knowledges is a crucial step in developing a competency-based teacher education program (Brock, 1978). Phelps (1976) identified three approaches to identifying and validating competencies and knowledges. One group contends that validation of competencies should be based upon empirical data which verify that the proposed competencies result in achievement by students in the classroom. A second approach uses descriptive techniques including questionnaires to determine the frequency of performance and perceived importance of specified tasks (Phelps, 1976; 20). Such competency statements are based on the opinions of vocational teachers as well as experts in the field, such as teacher educators, State Department officials, and researchers in education. Other persons have stressed detailed analysis of theoretical models for professional roles (Phelps, 1976; 20).

Professional competencies and knowledges of vocational teachers have been identified in a number of studies. Some of these studies have attempted to specify the pedagogical competencies needed by all vocational teachers while other studies have focused on specific vocational program areas (such as industrial education) or on special competencies needed by postsecondary technical educators.

Of the generic studies of competencies and knowledges needed by vocational education teachers, Cotrell's (1971) study has generally been recognized as the most comprehensive. The pedagogical requirements of vocational and technical teachers were developed by making a career analysis of vocational-technical teaching which resulted in the identification of 390 performance elements. The performance elements were clustered into ten functional areas: 1) program planning, development, and evaluation; 2) instruction-planning; 3) instruction-

execution; 4) instruction-evaluation; 5) management; 6) guidance; 7) school-community relations; 8) student vocational organizations; 9) professional role and development, and 10) coordination. The conclusions of the study indicated that most pedagogical performance requirements for teachers were common to all vocational program areas (Cotrell, 1971).

Cotrell's work has formed the basis for other studies including the development of 100 instructional models intended to provide instruction in each of the identified performance elements (Fardig, 1976). Cook (1972) used Cotrell's competency list to develop a competency-based system for the preparation of teachers, supervisors, and administrators in vocational education which included performance objectives, course content, an evaluation system, and a computerized management information system.

Other studies have used similar approaches. In 1975, Lovelace and Pope conducted a study to identify tasks performed by secondary vocational teachers and to determine the relative amount of time spent performing these tasks. Seven random samples were drawn from a population of vocational-technical teachers in Texas from seven different vocational program areas. Analyses performed on the data included both individual vocational program analysis and total group data analysis.

DeVaughan (1974) completed a study in which 92 teacher competencies were rated by select groups in Oklahoma. Respondents surveyed included vocational education college seniors, vocational-technical teachers, administrators, advisory council members, Personnel Development Council members and State curriculum center staff. Competencies were rated as to their perceived importance by 497 respondents.

A number of studies have been implemented that attempt to identify competencies and knowledges within a given program area in vocational education. Andreyka (1976) identified and validated 92 competencies needed by vocational

business education teachers in Florida. Competencies were identified through a literature review and validated by a respondent group consisting of 24 members of the Florida Chapter of Delta Phi Epsilon, an honorary graduate business education association.

Two studies were reviewed that identified competencies and knowledges needed by industrial arts teachers. Koble (1977) developed and validated 28 competencies and knowledges needed by beginning teachers of industrial arts education (K-12) in Pennsylvania. Three regional workshops were held where participants generated statements of necessary competencies and knowledges. The list developed was then presented to 125 persons for validation who were attending an annual industrial arts conference. Andreyka (1976c) also developed a list of competencies and knowledges for middle and high school industrial arts teachers in Florida. A list of competency and knowledge statements was developed through a review of literature, input from project staff members, and review by an advisory committee. These competencies and knowledges were then rated through a questionnaire by 92 industrial arts teachers.

Three studies focused specifically on competencies and knowledges of the industrial education teacher. In 1960 Walsh carried out a Federally funded study to identify competencies needed by teachers in trade and industrial education. The study was National in scope with teachers, supervisors, and teacher educators representing all States and territories ranking 107 competency statements in order of their importance.

Bjorkquist (1974) in a preliminary phase of a vocational teacher education project at the University of Minnesota developed a list of 121 competencies and knowledges which were evaluated by a panel of experts composed of vocational teacher trainers from the Minnesota State Department of Vocational Education, teacher-educators from colleges and universities in Minnesota, and teacher supervisors of Minnesota's area vocational-technical institutes. These

competencies were validated through interviews with newly employed vocational industrial teachers and those with three or more years of experience.

In Florida Andreyka (1976d) identified competencies and specific criteria intended to assess mastery of competencies by industrial education teachers. An initial list of competencies and knowledges was developed and reviewed by an advisory committee and then validated by four teams in a Statewide workshop. Each team was composed of one teacher educator, one vocational administrator, and two industrial education teachers. The 65 competency and knowledge statements were organized into 8 categories: 1) orientation for vocational teachers; 2) preparation for instruction; 3) presentation of instruction; 4) application of learning; 5) evaluation; 6) classroom/laboratory management; 7) human relations; and 8) professional role.

In 1974 the American Home Economics Association (A.H.E.A.) identified competencies and knowledges for home economics teachers that were determined by 71 participants at a National home economics workshop. Participants represented all subject matter and professional sections of A.H.E.A. and other participants chosen for their experience in competency-based education. Twenty competencies and knowledges were identified in the following categories: 1) educational philosophy in home economics; 2) professional role in home economics; 3) program planning for education in home economics; 4) the educative process in home economics; and 5) research in home economics and education.

The competencies required of cooperative vocational education teachers were studied by Andreyka (1976) and Mitchell (1978). Andreyka identified 73 competencies and knowledges through a literature review and a survey of 150 teacher-coordinators in Florida schools. Mitchell (1978) analyzed the professional tasks performed by vocational cooperative coordinators in secondary schools in Texas who had taught at least one year in a vocational program area and coordinated vocational-academic education during the 1976-77 school year.

A number of studies reviewed focused specifically on competencies and knowledges needed by vocational-technical teachers in community/junior colleges. Miller (1971) attempted to determine the professional education competencies and knowledges of vocational-technical teachers in the program areas of business education and distributive education in the community colleges of California, Colorado, Oregon, and Washington. One hundred sixty individuals from 40 community colleges responded to a questionnaire containing 99 professional education competencies and knowledges.

In 1972 Lovelace and Pope reported the results of a study designed to identify the teaching skills and knowledges common to all vocational programs and those unique to a vocational program area in vocational-technical postsecondary programs conducted in public community colleges in Texas. This project was to facilitate the development of inservice and preservice training activities. One hundred forty-nine performance elements were identified as needed across all program areas.

In a later publication Lovelace and Pope (1977) presented the findings from several studies designed to identify tasks typically performed by vocational-technical personnel on both the secondary and postsecondary level. Each of the studies reported relied on a task inventory approach developed and validated by Christal and Lovelace. The categories used for the tasks were the same as those developed by Cotrell.

Finally, two studies concerning competencies and knowledges needed by vocational educators in Wisconsin's Vocational, Technical, and Adult Education System were reviewed. McClellan (1975) identified and validated 25 competencies and knowledges needed for an effective adult educator through a survey of administrators, coordinators, and teachers. Halfin (1977) identified competencies and knowledges needed by beginning vocational, technical, and adult education personnel in Wisconsin and made recommendations concerning alternative systems for

professional training leading to teacher certification. A series of 63 competency and knowledge statements were generated and rated as to their importance by a survey sample including new teachers, certified teachers, and teacher educators.

In summary, considerable attention has been given to the identification of specific pedagogical competencies and knowledges necessary for vocational-technical teachers. A number of studies appear to have provided a base for the development of instruction concerning these identified competencies and knowledges. The studies reviewed, thus far, however, do not consider special competencies and knowledges that may be needed to deal with special populations including the disadvantaged and handicapped.

B. Competencies and knowledges required by vocational teachers of handicapped students.

This section reviews the literature related to competencies and knowledges needed by instructional personnel who provide vocational training to handicapped persons. Vocational training for disabled individuals occurs in a variety of institutions and agencies including the public schools through vocational education and special education; State institutions for the retarded, deaf, blind, and emotionally disturbed; community mental health centers; State vocational rehabilitation; rehabilitation or sheltered workshops; and private associations such as the Epilepsy Foundation or United Cerebral Palsy. These various programs are generally associated with vocational training designs developed through either special education, vocational education, or vocational rehabilitation. Each of these disciplines has developed its own particular approach and general pattern of services for providing vocational training for handicapped persons and consequently different types of personnel to deliver these services.

In the succeeding pages a brief review of the service delivery system developed to serve handicapped persons through vocational education, special education, and vocational rehabilitation is presented. It is followed by a

description of the personnel involved and a review of the literature concerned with the competencies and knowledges needed by these various personnel in serving handicapped persons in vocational programs. The primary focus in this review of the literature is on those skills needed specifically by vocational education teachers that will enable them to effectively train handicapped persons. Reviewing those competencies and knowledges needed by persons who provide vocational training for the handicapped through special education and vocational rehabilitation, as well as, studies concerned with competencies and knowledges of vocational teachers, should provide a comprehensive understanding of the types of skills needed to serve handicapped persons via vocational training. Also this will insure development of a comprehensive listing of competencies needed by regular vocational education teachers to provide effective vocational training for handicapped persons.

1. Vocational Rehabilitation. While rehabilitation facilities have existed for more than a century, their greatest growth has been in the last 10 to 15 years. Initially rehabilitation facilities dealt primarily with individuals who had some sort of physical disability. Special programs for the blind and deaf were established beginning in the nineteenth century. Vocational rehabilitation facilities attached to hospitals became more prominent with the initiation of vocational rehabilitation services to those injured in war and in industrial accidents in the twentieth century. In the 1950's and 60's mentally retarded persons and those emotionally disturbed received increasing attention. In the 1960's mentally handicapped persons were declared eligible for vocational rehabilitation services and consequently rehabilitation facilities to serve these needs began to develop at a rapid rate. From 1967 to 1974 the number of workshops increased from 885 to 2766, and client loads more than doubled (Nelson, 1971).

As rehabilitation facilities began to deal with increasing types and numbers of disability groups, the need for new methods of providing adequate training became evident. Rehabilitation programs saw increasing numbers concerning services provided to mentally retarded, emotionally disturbed, and multiple handicapped individuals. These individuals, as now, often manifested significant deficits in personal and social skills, had little concept of the meaning of work, and needed special training in the social skills and work habits required of a normal work situation. Out of these needs a general approach to service delivery began to develop that attempted to meet these needs. This system, shown in Figure 1 includes the following components: 1) vocational evaluation; 2) sheltered employment; 3) work adjustment training; 4) personal-social adjustment training; 5) skills training; and 6) placement and follow-up (Mills, 1972; Baker and Sawyer, 1971; Dickerson and Andrew, 1974).

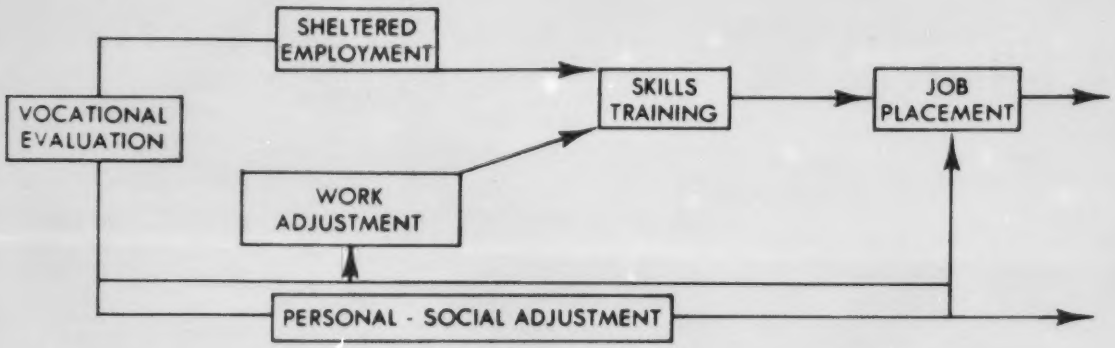

FIGURE 1
A model indicating the delivery of vocational rehabilitation services to handicapped persons

The development of this general model of the delivery of vocational services to handicapped persons spawned several types of new personnel to staff these programs. Personnel especially important to vocational educators are the vocational evaluator, work adjustment specialist, and skills trainer. Efforts to identify competencies needed by these individuals may be instructive as vocational

educators deal with many of the same concerns as those individuals when training handicapped persons in vocational programs.

Vocational evaluators generally assess the vocational abilities, interests, and aptitudes of handicapped persons and make recommendations for continued vocational training. Vocational evaluators have been employed primarily in rehabiitation facilities but increasingly are being employed in secondary and postsecondary schools (Johnson, 1979; Hutchinson, 1975). The field of vocational evaluation is relatively new and only five universities presently offer specific training for vocational evaluators. In 1975 the Vocational Evaluation and Work Adjustment Association (Hutchinson, 1975) sponsored a National effort to explore and clarify the role of vocational evaluation and the vocational evaluator. In the final report one of the task forces identified ten knowledges and fifteen competencies needed by vocational evaluators. These included skills related to selecting, administering, and interpreting appropriate vocational assessment techniques, and understanding of and ability to share occupational information. Other important competency and knowledge areas were the ability to organize and participate in interdisciplinary staffings, motivate and support the client, and use community resources.

Later Rubin and Porter (1978) reported the results of a study carried out as part of the National Seminar on Competency-Based Rehabilitation Education whose purpose was to: 1) identify and evaluate competencies needed by rehabilitation counselors and/or vocational evaluators; and 2) determine the location of training for each competency and knowledge. Two hundred forty-one competencies and knowledges were identified as essential for evaluators and counselors. These competencies and knowledges were broken down into the following categories: 1) analysis, synthesis, interpretation of client information; 2) counseling and interviewing; 3) job development, analysis, placement; 4) measurement of human potential; 5) resource utilization; 6) human growth and development; 7)

administration and case recording; 8) professional; 9) medical and pyschological; 10) training, treatment, orientation; 11) consultation; 12) research; and 13) rehabilitation history and philosophy.

Skill training or vocational training has tended to exist only in the larger, more sophisticated facilities. Existing standards of the State Education Agency for vocational education teachers have generally been used. While no specific competency and knowledge studies have been carried out through vocational rehabilitation sources concerning those competencies and knowledges which individuals must have to work effectively with handicapped persons, Gold (1977), Flexer (1976), and others have done much work in developing instructional technology designed to provide basic work skills for severely and profoundly retarded individuals. Their work has important implications for skills needed by vocational educators working with mildly and moderately retarded students as well as persons with other disabilities. Gold (1977) has developed a process of individualized task analysis by which the task, the format of teaching those tasks, and the type of feedback given the learners, is systematically examined to provide a very individualized training process for the handicapped learner.

Work adjustment specialists in rehabilitation facilities carry out various functions including counseling and instruction in job skills, and personal-social and/or employability skills (Wainwright and Couch, 1977). In 1978 Menz completed the first National study to identify competencies and training needs of work adjustment specialists working in rehabilitation facilities. Nineteen competency areas called "competency factors" in the study were identified and a role definition was formed for the adjustment specialist out of the underlying emphases of these competency areas. The primary role of the adjustment specialist involved the responsibility to implement adjustment plans directed at specific marketable skills and work habits, and the personal development of the client using prescribed teaching and training, behavior modification and/or other change

techniques. Some of the most important competency factors were identified as: 1) specific marketable skills and work habits; 2) individualized client programming; 3) professional communications/paper work; 4) behavior modification/change; 5) client supervision; 6) general client programming; 7) vocational information and resources; and 8) vocational information technologies.

In response to legislation and professional accreditation processes, staff development materials for all rehabilitation facility staff have reflected increased concern with the ability of staff to formulate an individualized training plan for handicapped learner in the context of an interdisciplinary conference with input from the disabled individual and parents. Houts (1975) and Parham (1976) have both developed inservice training programs to deal with this specific competency.

2. Special Education. The latter half of the twentieth century has seen a tremendous growth in the provision of special education programs for handicapped children. In the nineteenth and twentieth centuries, State residential institutions had been developed where handicapped individuals were sent for special services and training. Unfortunately, the result too often was eventual life-long residence in this institutional setting. In the 1950's parents associations and others began to demand special education services in the public schools for their children. Legislation and litigation responses to this issue gave strong impetus to this movement and education for handicapped children in the public schools grew at a rapid rate.

Initial emphasis for special education services was primarily oriented towards services for children in the elementary school. However, in the 1960's there was widespread recognition of the need for vocational programs for the handicapped in secondary schools as opposed to programs that focused primarily on academic skills (Brolin, 1976). The response of the developing field of special

education to this need was the establishment of work/study programs in which students spend part of the day or week acquiring work experience and job skills in community work stations, and other time studying related academic subject matter. In most States this program involves a cooperative working relationship between the local vocational rehabilitation counselor and the work study coordinator from special education.

Brolin (1976) described approaches to vocational programs in special education used throughout the country:

> Several school systems have created separate work centers to evaluate vocational potential and provide prevocational skill training and work adjustment for their secondary students. Students spend part of each day in the center and part in their classroom concentrating on vocationally oriented subjects. Eventually they are placed in training positions in the community. Another approach is to send students to a rehabilitation workshop for evaluation and vocational training. A third approach provides evaluation, counseling, and adjustment in the classroom as well as in school and community job experiences.

Both on-campus and community work experiences are used in the work/study program. Smith (1974) has developed six steps describing the articulation process from school to work that begins with total in-class activities, moves on to on-campus work, ending in part-time and finally full-time placement at a community work station.

Depending upon the particular design of their program, public schools have employed varying types of personnel to staff their vocational program for secondary students developed through special education. However, for larger schools the most normal pattern has been the utilization of two types of staff: 1) the work/study coordinator; and 2) the secondary teacher who is responsible for the classroom work of the student. In smaller schools one individual may fulfill both of these roles (Brolin, 1976).

Despite emphasis on vocational programs there are still many schools who do not offer vocational programs for handicapped students at the secondary level,

they are offered to only certain disability groups. Deshler (1979) reported from a National survey of programs for learning disabled persons that only 5 percent of the surveyed programs provided work/study opportunities and only 17 percent focused on functional skills such as daily living skills, personal-social skills, et cetera.

While work/study programs have been reported to produce positive results as evidenced by Chaffin (1971) and Halpern (1972), a number of problems have been evident. These include the lack of preparation of secondary level teachers in vocational and career education skills (Kokaska, 1971); the lack of emphasis on specific job skills development which has often led to placement in jobs below the potential of the handicapped student (Razeghi and Davis, 1979); and the lack of training in related personal, social, and living skills necessary for independent functioning in the community (Brolin, 1976).

In the 1970's two major educational movements had impact on the continuing evolution of special education vocational programs: 1) the mainstreaming movement; and 2) career education. As programs developed in special education in the 1950's and 1960's they generally involved total separation of the handicapped students from nonhandicapped peers in a self-contained classroom. Instruction was given primarily from one teacher assigned to that class. Concern about the integration of handicapped persons into the mainstream of society has resulted in major litigation and legislation requiring integration of handicapped students into regular school classes as much as possible. Resource rooms and other support services have developed to aid the handicapped student's participation in regular classes (Kirk, 1972). Emphasis has also been placed on cooperative efforts between vocational and special education teachers to facilitate the utilization of regular vocational education programs by handicapped students (Phelps, 1977).

Career education as a major educational movement had its inception in 1971 when Sidney Marland, U. S. Commissioner of Education, emphasized the concept at a

National convention in Houston, Texas. A number of individuals in special education have seen in this concept a way to orient the programs of the public schools to the total training needs of the adolescent handicapped student (Brolin and Kokaska, 1979).

In 1974 Brolin conducted Project PRICE (Programming for the Retarded in Career Education) in which 22 competencies and 102 subcompetencies were identified as training needs for secondary level educable mentally retarded students. These competencies were broken down into three curriculum areas: 1) daily living skills; 2) personal-social skills; and 3) occupational guidance and preparation. Originally based on the needs of retarded individuals, Brolin expanded the focus to the needs of individuals with a wide variety of disabilities. He developed procedures by which these training needs could be adopted to provide a total curriculum for the secondary special education student (Brolin, 1978).

Following this model of career education, Brolin and Kokaska (1979) defined career education as "...the process of systematically coordinating all school, family, and community components together to facilitate each individual's potential for economic, social, and personal fulfillment." This model is graphically illustrated below.

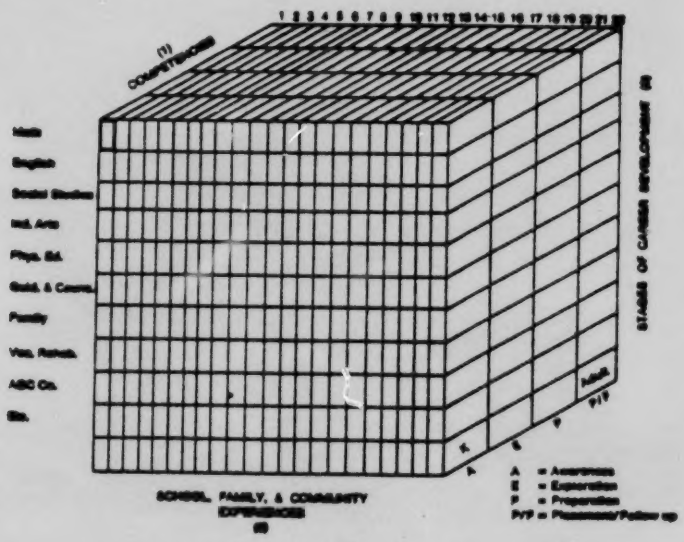

FIGURE 2
Competency-based career education model
Source: Brolin and Kokaska (1979)

This emphasis on a total career education program had and continues to have impact on vocational training programs for handicapped students, as it places vocational training in context with all of the functional training needs of the handicapped individual.

The provision of adequate training for the secondary teacher in career and vocational education skills has been a primary concern of special educators interested in vocational training of handicapped persons. Clark and Oliverson (1973) report that programs to train secondary level special education teachers are almost nonexistent. Many individuals in the literature speak of the need to provide special educators specific skills in vocational and career education training (Schwartz, 1967; Younie, 1966; Sheperd, 1966; Sparks and Younie, 1969). Evans (1975) pointed out that special education departments are concerned mostly with younger children. In 1978 Gillet surveyed 125 institutions of higher education offering degrees in special education, and based on the results of this survey, concluded that the career education training needs of teachers are not being met. Twenty of the surveyed preservice programs offered at least one course in career education for handicapped persons; 10 indicated they intended to offer such a course in the future; 29 had no plans to do so, and 48 were undecided.

The identification of competencies and knowledges needed by secondary special education personnel has been somewhat difficult as the proposed and actual roles of special education personnel have been numerous and ever changing. In training special education teachers primary emphasis has been placed not only on elementary school but upon training teachers as disability specialists. This has made more difficult a shift in focus to a functional training area such as vocational training for a certain age range that might include individuals with a number of disabilities. In addition, the mainstreaming movement has placed a shift of focus from the special education teacher as a resource person, and career education has stressed abilities needed by the special education teacher to train students in

occupational, personal-social, and daily living skills, as well as academic skills (Brolin, 1974). Those attempting to identify needed competencies and knowledges of secondary teachers of handicapped persons have had the extra difficulty of attempting to define competencies regarding teacher roles that do not often exist.

In 1972 Melby and Regal compiled and evaluated a list of 67 competencies in five general areas for special education personnel. The general competency areas included: 1) teacher affect; 2) teacher characteristics; 3) teacher interaction with other school personnel; and 4) teacher relationships with parents and the community.

Competencies needed by teachers of emotionally disturbed children were identified by Hewitt, Bullock, and Whelan. Hewitt (1966) identified competency statements which he placed into seven categories: 1) objectivity; 2) flexibility, 3) structure; 4) resourcefulness; 5) social reinforcement; 6) curriculum expertise; and 7) intellectual model. Bullock and Whelan (1971) surveyed 47 midwestern teachers of emotionally disturbed and socially maladjusted children using an 88 item checklist entitled the Teacher's Evaluation of Competencies. Twelve competencies were identified as very important. These competencies referred to general teacher skills and did not include competencies dealing specifically with vocational training.

Mackie (1957) identified 100 competencies needed for teachers of the retarded that were compiled, evaluated, and ranked by a panel of experts in the field of mental retardation. These competencies were divided into four major areas: 1) understanding the characteristics of the mentally retarded child and his place in society; 2) developing a functional curriculum based on broad personal and social needs of the mentally retarded; 3) understanding and applying appropriate pedagogical procedures based on an understanding of the known learning characteristics of the mentally retarded; and 4) selecting, developing, and using

appropriate instructional materials and equipment in teaching mentally retarded children.

Mackie's competencies did not include a specific focus on secondary level students or vocationally-oriented competencies. However by the late 1960's and early 1970's efforts to identify specific competencies for the secondary teacher dealing with the adolescent educable mentally retarded student were under way. Sparks and Younie (1969) reviewed the adult adjustment needs of the educable mentally retarded. Dinger (1971) identified 41 competencies that he felt were necessary for teachers of secondary level educable mentally retarded students which included a prevocational background in the semi-skilled and unskilled positions of the community. This would permit teachers to present a valid prevocational training experience for students.

In 1972 Brolin and Thomas completed a Federally funded study designed to develop a model program for the preparation of teachers of secondary level educable mentally retarded students. Based upon Clark's (1971) contention that teacher competencies must be predicated on a prior assessment of student training needs, a group of National leaders and 30 professional and lay people identified 90 student needs and 113 teacher competency statements. This total of 203 statements was further synthesized into a list of 31 competencies. These 31 competency areas consisted of four categories: 1) occupational; 2) activities of daily living; 3) psychosocial; and 4) academic. All 31 competencies were rated as being highly important by 205 secondary special education teachers and supervisors. The results indicated that teachers thought vocational and career education experiences were much more valuable to the secondary educable mentally retarded student than academic experiences. The respondents indicated further that secondary special education teachers were not receiving training in this area therefore the career education needs of the students were not being met (Brolin, 1972).

Focusing more specifically on the training needs of the work/study coordinator, Younie and Clark (1969) identified competencies that teachers of work/study programs said they were lacking through a survey of 103 work/study teachers in 6 states. The competency areas in which these teachers felt they needed training formed three general categories: 1) inter-professional relationships, 2) classroom management; and 3) community services.

Campbell (1971) at an institute for teachers of secondary educable mentally retarded students in California, reported on a study implemented in 1968 which revealed that teachers of those handicapped indicated that they needed to be skilled in the following areas:

1. Analyzing specific employment situations and identifying jobs that could be performed by retarded youth, making job breakdowns, preparing job descriptions, and transforming job requirements into an educational program.
2. Surveying communities for potential training stations, making contact with employers, and persuading employers to cooperate with the schools in work/study training programs.
3. Working with persons to coordinate the federal civil service programs for placement of mentally retarded young adults.
4. Working with industrial welfare to coordinate on-campus and work/study assignments wherein less than the minimum wage was being paid to the student.
5. Evaluating occupational potential and the trainee's progress once he has been placed in a training situation.
6. Conducting ongoing follow-up studies in each phase of the work/study program and feeding this information back into program evaluation as it refers to the curriculum and to program modifications.

Additional studies have indicated competencies needed by work/study teachers. D'Alonzo (1974) identified 63 qualities that compose the role expectations for work/study coordinators. These include involvement in the community, school, business, and industry with primary emphasis on placement and supervision of secondary handicapped students in on-the-job training situations. Westling and Schwartz (1978) suggested that work/study coordinators must have public relations skills and understand industry so that they can successfully place students in employment training situations. Other writers focus on specific competencies needed in interacting with employers (Sigler and Kokaska, 1971; Payne, Mercer, and Epstein, 1974).

3. Vocational Education. In 1966 the National Advisory Committee on Vocational Education found that vocational training services for handicapped persons were badly needed. Therefore the committee adopted recommendations for a stronger commitment by vocational education to serve handicapped, disadvantaged, and other special needs populations. Subsequent legislation in 1968 and 1976 provided a strong emphasis from the Federal government on the provision of vocational education to handicapped persons. Set-aside funds were provided that were to be explicitly used to supply vocational education services to disabled persons.

Vocational education in the past was primarily identified with secondary public schools, although postsecondary schools have been increasingly providing a greater share of occupational training. Therefore, it is not surprising that initial efforts to provide vocational education for handicapped persons found its greatest emphasis at the secondary level. A wide variety of service delivery systems have been developed in the context of vocational education. Components of these programs have included vocational assessment, prevocational preparation, occupational exploration, on-the-job training, use of rehabilitation facilities, coordinated remedial education, regular vocational education classes, and so on

(Parker, 1974). Some programs have attempted to integrate the best features of vocational education, special education, and vocational rehabilitation systems into a program that would serve the needs of the handicapped individual (Lake, 1974).

A primary issue in the development of vocational programs for handicapped learners has been the question of whether vocational programs for handicapped persons should be set up separately from the rest of the school, or whether integrating handicapped students into regular vocational classes would be best for students. Many have been developed as separate programs under the rationale that special attention can be given to meet the special needs of the handicapped student. However, educational legislation, including the Education for All Handicapped Children Act (P.L. 94-142) and the Vocational Education Amendments of 1976 (P.L. 94-482), has emphasized placement of the student in regular classes to the extent possible. This has caused a growing emphasis on developing an adequate system that will allow successful integration of handicapped students into regular vocational education classes (Dahl, 1978).

The Federal government has sponsored a number of projects whose aim is to facilitate mainstreaming of handicapped students into vocational education classes. As a result a variety of techniques are being used by the public schools to do so. Learning counselors (Garfield and Drugo, 1979), aides to work with handicapped students, special remedial and related tutoring (Parker, 1974), and cooperative planning with special education (Phelps, 1977), are all being implemented as services to the handicapped student in the regular vocational classroom. Attention is also being given to curriculum development, accessibility to vocational programs, agency coordination, and modification of equipment for use by handicapped persons (Dahl, 1978).

A prime area of concern in providing vocational education for handicapped students in the regular classroom is that of personnel development. A number of

studies (Yung, 1978; Phelps, 1976; Holmes, 1975; Meers, 1977; Brolin, 1977) have identified a great need for training vocational educators in skills needed to teach handicapped persons. A present shortage exists in preservice and inservice training designed to meet this need. Eight states, at latest count, are offering some type of special needs certification or endorsement through their universities or State departments (Meers, 1978). In 1973 Kruppa received responses from 128 colleges and universities offering industrial education programs. Of these, only 11 indicated special preparation of their teachers in skills needed to instruct handicapped and disadvantaged persons (Kruppa, 1973).

As personnel development has become a key issue, increasing attention has been given to identifying those competencies needed by vocational educators if they are to successfully integrate handicapped students into their classrooms. Several studies and a variety of staff development materials have provided useful information. Some studies have focused on the competency and knowledge needs of teachers in general who are teaching handicapped students in regular classes; others focus on competencies needed by vocational teachers working with special needs students. Some studies focus on specific program areas in vocational education, such as home economics, others are more generic, while still others focus on a specific disability group, the mentally retarded for example.

By 1975 research in education had not contributed significantly to a scientific approach for identifying performance elements of teaching that were basic as criteria for determining objectives to be achieved by individuals who were preparing to be vocational teachers or who were in the process of professional improvement as vocational teachers. The lack of research to be used for development of curricula for vocational teacher education was emphasized by the following statements made by Rosenshine (1973:28-29):

> The results of the research, to date, are best seen as providing suggestions for future research, not future practice.
>
> At present, the conclusions are not ready for translation into teacher training competencies.
>
> The research base for building teaching competencies is extremely thin. . . .
>
> This lack of research on products developed by agencies other than colleges of education is distressing for a number of reasons. First, it perpetuates a familiar educational program of develop and disseminate and let validity lie in the eye of the beholder.

Houston (1972) reviewed and listed the various approaches used by colleges and universities to identify vocational teacher competencies. All of these approaches were common in that they were reported or derived from what could have been called perceived importance. The only real variation in the approaches was a form of task analysis referred to by Houston (1972:33) as follows:

> TASK ANALYSIS: Sometimes referred to as role analysis, in this approach the teacher is observed in the act of teaching. These observation records are then analyzed and a teacher preparation curriculum is based on that analysis.

A study under the direction of Cotrell (1971) was generally recognized as the most comprehensive study of competencies for vocational teachers. In Cotrell's study, the pedagogical requirements of vocational and technical teachers were developed by making a career analysis which resulted in the identification of 390 performance elements. To obtain valid information as to the pedagogical requirements, it was necessary to survey the teachers or incumbent workers themselves. Previous studies had been conducted which obtained perceptions of what administrators and teacher educators thought the teachers needed in the area of pedagogy. The user or teacher of the information (instruction) provided in the curriculum was not considered in most of the previous surveys.

A very similar study to that done by Cotrell was completed by the Educational Personnel Development Consortium D under contract with the Department of Occupational Education and Technology of the Texas Education Agency. The rationale for this study, coordinated by Pope (1972), was based on the fact that the Vocational Education Amendments of 1968 do not mention any of the traditional

program areas; rather they spoke of the training needs of people. One major thrust of this project was to identify the teaching skills and knowledges that were common to all vocational programs and those which were unique to each program area in vocational-technical postsecondary programs being conducted in public community colleges in Texas. An additional objective was to assist in the development of a model for inservice and preservice activities. The project spanned 12 months beginning July 1, 1971 through June 30, 1972. Opposition to funding the study involved the fact that the reviewers, which were the State vocational program directors, felt they had a better understanding of what the teachers needed than the teachers themselves. Results of the study proved otherwise. Respondents to the study indicated they needed training in areas dealing with specific populations such as disadvantaged and handicapped students that was not in the teacher education curriculum.

The importance of surveying teachers to assess their needs for training can be evidenced in a study conducted by Miller (1971:56) which included statements such as:

> The adequacy of existing teacher education programs should be viewed in terms of what instructors are actually doing in the performance of their jobs.

Further, Bjorkquist (1974) in a preliminary report of a vocational teacher education project involving 120 competencies being conducted at the University of Minnesota stated:

> For teacher education programs preparing entry-level teachers we need to ask what competencies are needed to become a teacher rather than ask what competencies are possessed by an ideal teacher. Using the basic information available to us about what teachers do, we need to identify those things they must be able to do.

Bjorkquist (1974) was convinced that is was essential to ask teachers what they needed in developing both preservice and inservice training programs. Other studies and projects conducted for identifying and listing competencies of

teachers such as the Florida Department of Education (1973) and Terry, Thompson, and Evans (1972), have been based on what educators perceive teachers should be able to do.

The vocational teacher's own perception of the importance of tasks to be mastered and knowledge to be learned is considered by many as the most important factor in determining the content of a vocational teacher education program. Thus, the teacher's perceptions of competencies (tasks) and knowledges (theory) necessary to teach effectively are becomming the criterion for development of the teacher education curriculum. However if we are to be realistic in developing an improved curriculum for the professional education of vocational-technical teachers, it must be determined if the tasks teachers perceived they should be able to perform are the tasks that teachers actually perform.

According to Lewis (1973), a different approach to identifying competencies and knowledges of teachers has been used by the United States Employment Service in order to write job descriptions. The job analysis process for determining content of instructional curriculum may be considered as being inappropriate for professional occupations by some educators. However, the following are excerpts from job information, obtained by job analysis, and disseminated by the United States Training and Employment Service (1972: 236, 243, 270), for teachers:

> Instructs students in one or more subjects such as English, mathematics, or social studies, in private, religious, or public secondary school (high school):
> Verbal aptitude is required to read and understand textbook or other literature related to the subject matter taught; to lecture on, discuss, and explain subject matter. . . .
> Clerical perception is required to check accuracy of graph, charts, and written materials prepared as lesson aides. . . .

The job descriptions of teachers obtained from the identified competencies using a job analysis procedure are listed in the current Dictionary of Occupational Titles published by U. S. Government Printing Office, Washington, D.C. It is the philosophy of the United States Employment Service that jobs should be analyzed as

they exist and that job descriptions should not be developed on the basis of what one perceives a person should be able to do in a job or occupation. In describing the concepts and principles of job analysis the United States Training and Employment Service (1972:3) stated:

> Jobs should be analyzed as they exist; therefore, each completed job analysis schedule must report the job as it exists at the time of the analysis, not as it should exist, not as it has existed in the past, and not as it exists in similar establishments.

By the same token, if we are to determine what knowledges are necessary for teachers to perform the identified tasks, we must do a needs assessment of the teachers as well as their administrators and teacher educators.

The United States Air Force has used a similar but different approach to that of the Department of Labor for identifying the competencies (work tasks) of air force personnel. The identified competencies are used by the air force for developing curriculum and instructional materials for training purposes. In discussing data collected by the job inventory approach used by the Air Force, Christal (1973) in a paper presented at San Diego, California, emphasized its merits:

> Finally, the fact that information is quantifiable also means that it can be validated and checked for stability using conventional statistical techniques.
>
> Test-retest reliability in reporting frequency of task performance and length of task time has been fairly satisfactory, with mean coefficients of about 170.

The task inventory method of obtaining job information used by the Air Force collects the data directly from individuals performing the job. Respondents provide the job information by checking the tasks on the inventory that each performs and then rating each task checked in terms of relative amount of time spent on the task.

To further check the reliability of the task inventory method, additional studies have been conducted. One of the studies conducted compared worker and supervisor responses to an inventory of 479 task statements. Supervisors and

workers were divided into 94 pairs with the workers checking the task statements they performed and the supervisors checking the tasks which they felt the workers performed. Analyses of the responses by workers and supervisors resulted in the following conclusions reported by Hazel, Madden, and Christal (1964:78):

> 1. When compared to supervisors' estimates, there was no tendency for workers to exaggerate the number or difficulty of tasks they perform.
> 2. Task performance agreement defined by two indexes was higher than time-spent agreement at the task level.
> 3. Supervisors show higher agreement with workers on a broader or more general work level (i.e., duties), than on a more specific work level (i.e., tasks). For example, supervisor-worker agreement concerning distribution of incumbent's work time was 48 percent at the task level and 73 percent at the duty level.
> 4. With regard to supervisor-worker agreement on task performance, it appears that the level of agreement depends on the index used to measure agreement. Agreement on task performance was higher when computed in terms of performance or nonperformance of all tasks in the inventory (90 percent), than when it was computed in terms of only those tasks checked by the worker or his supervisor (57 percent).
> 5. For the specialty investigated, the generally moderate agreement (or disagreement) found between supervisors and workers concerning the nature of the worker's job suggests that a supervisor may not know precisely what any one subordinate does task by task. Since there was no tendency for workers to exaggerate the number or difficulty of tasks performed, the current task inventory procedure of collecting job information directly from workers seems preferable to collection of job information from supervisors.

Another study was conducted to determine the stability of data computed from job inventory survey returns and reported in consolidated job descriptions. The study was conducted by using ten previously surveyed career ladders. The cases or grouping of jobs in each career ladder were randomly divided into halves. Job descriptions were computed for each of the half samples and the percentage performing and percentage of time spent by total group vectors for each pair of job descriptions were correlated. Christal (1971:3) reported the following results:

> It was found that the vectors 'percent performing' and 'percent time spent by the total group' are highly stable, even for relatively small samples. Split-half reliability coefficients were generally in the middle and upper 90's.

It was concluded from the preceding studies that the job inventory method is a very feasible approach for collecting work-task information from large numbers at less cost than observation and interview methods.

Although not based on a task or job inventory, three studies have focused on those competencies needed by general classroom teachers instructing handicapped students. Haberman (1974) evaluated the 1972 graduates from the School of Education, University of Wisconsin and assessed perceived needed competencies and knowledges. These teachers indicated needs for greater training in dealing with emotionally disturbed, learning disabled, and retarded students. Goldman and Masla (1976) identified competencies needed by regular classroom teachers to effectively accomodate exceptional children which included: 1) orientation of regular education personnel to mainstream placements of exceptional children; 2) introduction to exceptional children; 3) human relations; 4) classroom management in the accomodative classroom; 5) curriculum and instructional materials; 6) diagnosis and evaluation methods for the teacher; and 7) diagnostic-prescriptive teaching for the teacher.

Rader (1978) reported the results of a three year Dean's Grant whose purpose was to develop and implement a preservice program to prepare teachers in: 1) vocational training; 2) industrial arts; 3) physical education and recreation; and 4) health. Thirteen competency areas were identified through a content analysis of other studies being carried on concerning Dean's Grant Projects in universities throughout the Nation: 1) nature of mainstreaming; 2) nature of handicapped persons; 3) attitudes; 4) resource and support systems; 5) learning styles; 6) teaching techniques; 7) curriculum; 8) communications; 9) evaluation of student progress; 10) learning environments; 11) administration; 12) assessing student needs; and 13) classroom management. Rader concludes, however, that no comprehensive list of competencies is available (Rader, 1978).

A variety of studies, workshops, and seminars have dealt with special needs students in vocational programs. As early as 1966 Groves wrote about teacher characteristics of vocational educators who work with special needs students including their personal, occupational, and educational qualifications (Groves, 1966). Kemp (1966) also identified, from program experience, 10 competencies which he considered critical for vocational teachers in successfully teaching special needs students.

Ferns (1971) identified nine training needs of special needs workers in vocational education programs through a Statewide interview of local administrators, consultants, and teacher educators in Michigan. These included: 1) developing awareness of the specific needs of the handicapped and disadvantaged; 2) knowing who the handicapped and disadvantaged are, how to plan programs for them, and how to accomodate them in regular programs; 3) comparison for and understanding of individuals; 4) knowing differences in teaching methods and materials for special needs students as compared to normal students; 5) evaluating programs; 6) adapting curricula to the open entry-open exit concept and the immediate feedback or reward concept; 7) developing skills in human relations; 8) handling potentially explosive urban situations; and 9) understanding of the drug problem, student dissent, and racial issues.

Kruppa (1973) identified competencies needed by industrial education teachers working with handicapped and disadvantaged persons to be used as a base for a curriculum to prepare industrial education teachers to work with special needs students. A jury of experts consisting of industrial education and special education faculty members from Trenton State College synthesized 330 competencies identified from three National studies. These competencies were classified into eight categories: 1) program development; 2) instruction; 3) knowledge of the learner; 4) community resources; 5) professional role and development; 6) management; 7) personality development; and 8) guidance.

An Ohio project in 1975 identified and validated 112 competencies necessary for vocational education teachers who deal with the disadvantaged and handicapped in special programs. The programs involved in this project were: 1) Occupational Work Adjustment (O.W.A.) - a cooperative program funded through the Department of Labor for 15 year old students; 2) Occupational Work Experience (O.W.E.) programs, a cooperative program for students ages 16 and older; and 3) special needs - special or modified vocational education programs for both disadvantaged and handicapped students. The identified competencies were validated by a respondent group composed of State, university, and local teacher personnel. The project results were disseminated to teacher educators in Ohio (Albright, 1975).

In Virginia, Sheppard (1975) implemented a project which examined the problems, necessary competencies, and inservice needs of those individuals employed as vocational teachers of handicapped and disadvantaged students. Sixteen competencies were rated by 107 graduate students.

A New Hampshire study by Wenig (1975) attempted to determine competencies needed by vocational education teachers to serve "nonsuccessful" students in a mainstreamed vocational education program. Through a literature review, 25 competencies were identified and subsequently rated according to importance and need of training by 172 respondents which included special education and vocational education teachers, administrators, and support personnel in New Hampshire. Seventy six percent of those surveyed indicated that they were not prepared to teach the "nonsuccessful" student.

Phelps (1976) conducted a study involving a formative evaluation of a series of 7 competency-based inservice modules dealing with the needs of secondary school personnel serving special needs students in vocational education. To fulfill this purpose the study involved three phases: evaluation of a preliminary list of competencies, developmental formative evaluation, and product/outcome evaluation of the modules. Thirty-two competencies were identified and rated as to their

importance, appropriateness for certain personnel, frequency of performance and need for training, by a team of 30 vocational education professionals.

In the same year Phelps (1976) reported on the activities of a National workshop on vocational education for special needs students that was designed and implemented as a team effort by teachers from the vocational education and special education departments of the University of Illinois and the University of Kansas. A series of professional tasks were identified as critical for personnel involved in vocational programs teaching special needs students. These tasks were placed into four categories: 1) assessing program and learner needs; 2) planning instruction; 3) implementing instruction; and 4) evaluating programs and instruction.

Meers (1977) implemented a project in Nebraska designed to develop and evaluate pre-service and inservice models for the training of vocational teachers of special needs youth. Meers (1976) also identified a series of 99 competencies for vocational teachers of special needs students which were grouped into seven categories: 1) program planning; 2) curriculum development; 3) method of instruction; 4) evaluation; 5) guidance; 6) human relations; and 7) management of learning and behavior.

In 1977 Brolin implemented a study to facilitate effective career education programming for handicapped persons in Missouri's secondary schools. The project's goals were to: 1) identify critical competencies needed by various types of school personnel such as counselors, special education teachers, and vocational education teachers, to work effectively with handicapped and disadvantaged students; and 2) to develop a conceptual model for both inservice and preservice training programs. Teachers and counselors were asked to indicate which of the 22 PRICE competencies they felt to be their responsibility, their past training and experience in teaching these competencies to handicapped and disadvantaged students, and their perceived training needs. The results of this

study indicated significant training needs for vocational education teachers, special education teachers, and counselors. Vocational educators identified their training needs in areas that included vocational assessment, individualized instruction, problem solving, motivation, behavior management techniques, and the ability to integrate students of various aptitudes and abilities into their classes. Comments received in the study reflected a need for attitude change towards disadvantaged and handicapped students (Brolin, 1977).

A study by Krantz (1977) focused on the competency needs of special needs coordinators in Minnesota. These individuals coordinate the vocational training for handicapped and disadvantaged students in Minnesota's public schools. A list of 44 competency statements was developed and subsequently validated by 33 employed coordinators. These competencies primarily focused on communication, coordination, and administrative competencies rather than instructional competencies.

While most of the surveys of competencies needed by teachers have been fairly structured, Sankovsky used an open-ended format to survey the problems and training needs of Alabama vocational educators working with disadvantaged and handicapped students. Key concepts and words were identified. These were clustered together, and a statement was written that would include all clustered statements. Perceived training needs were analyzed by cluster and by vocational program area. Nine overall clustered training needs were identified: 1) art and science of teaching special needs persons; 2) development and use of special materials and curricula; 3) developing interpersonal skills; 4) teaching reading skills; 5) information on special resource material; 6) training in motivational technology; 7) using experienced teachers as trainers; 8) development and use of individualized instructional materials; and 9) teaching math skills. The authors recommend close attention to the provision of preservice as well as inservice training in the skills required to teach handicapped and disadvantaged persons.

Jensen (1978) identified training needs of vocational educators working with special needs students in Project VESNIP. This project involved several phases: 1) a general assessment of interest in training in vocational education-special needs; 2) a review of the literature to identify teacher competencies; 3) drafting of the questionnaire; 4) field testing the questionnaire with vocational and special education teachers; and 5) revision of the questionnaire.

Yung (1978) reported on a comprehensive Arkansas project designed to develop and implement preservice and inservice teacher education programs to address the needs of special needs students in vocational programs. This report gives the results of the initial training needs assessment. Forty three competencies were identified through a review of the literature as being most important for vocational education-special needs teachers which were divided into the following categories: 1) needs assessment; 2) planning process; 3) instruction; and 4) evaluation. A questionnaire was developed to ascertain the importance of each task and the confidence the teacher felt in performing the task. A total of 29 superintendents and 317 special needs education personnel in 36 school districts responded. Results indicated that both superintendents and teachers felt that inservice in special needs is absolutely necessary and that 39 of the competencies were very important. These 39 competencies will form the basis of 18 instructional objectives for preservice and inservice training to be developed by the project.

While a number of significant studies have dealt with special needs youth in vocational education, the literature reveals less of an emphasis on the training needs of vocational educators to train handicapped persons specifically. A number of journal articles have dealt with training techniques useful in working with handicapped persons (Birkland, 1968; Flexer and Mertin, 1976; Gold, 1977). Other studies specifically deal with competencies needed to work with handicapped

persons (Brock, 1978; Ankreyka, 1976). However, for the most part studies concerning competencies needed to deal with special needs students are nonexistent.

Eads (1975) conducted a study to identify competencies needed by vocational specialists who coordinate the education of handicapped students in Georgia's Secondary Level Vocational Education Awareness Program. A list of 187 competencies were developed and ranked in order of importance by employed vocational specialists.

Two studies have focused on the analysis of specific competency areas needed to work with handicapped persons. Krauft (1975) investigated the relationships between the attitudes of vocational instructors towards persons with disabilities and the vocational training completion rate of disabled students. No significant relationship between these variables was indicated, suggesting that successful completion of training may be more dependent on student abilities and interests with instructor attitudes playing a smaller role (Krauft, 1978).

Nelson (1976) studied specific competencies needed by teachers in order to develop valid and effective occupational learning experiences for educable mentally retarded students based on available diagnostic test data and information. A series of teams, each composed of a vocational and special education teacher, a counselor or work evaluator, and a media specialist from secondary and postsecondary schools identified problems and needs, developed solutions, and tested them with educable mentally retarded students. A list of 74 competencies was identified and rated as to their importance as well as the present ability of the teachers to perform them.

In a Florida study, Andreyka (1976) identified some 90 competencies needed by teachers, administrators, and supervisors serving handicapped students in Florida that were divided into ten categories: 1) program planning, development, and evaluation; 2) instructional planning; 3) teaching methods-media; 4) student

evaluation; 5) management; 6) guidance; 7) school-community relations; 8) student organizations; 9) instructor's professional role and development; and 10) unique competencies.

Two additional projects have developed a set of competencies needed by vocational teachers of handicapped students. Brock (1978) describes a project originally designed to develop a training program for secondary teachers of educable mentally retarded persons whose goals expanded to provide training to vocational education teachers of the handicapped, as well as, serving as a National model for training of vocational educators of handicapped persons. Eighteen competencies were identified from a detailed analysis of the role description for vocational teachers of the handicapped; performance criteria were created; and methods of training in specific competency areas were indicated. In Texas a handbook for vocational education teachers of the handicapped was created which included a list of competencies necessary for the vocational home economics teachers (Home Economics Instructional Materials Center, 1978).

In addition to specific competency studies, staff development materials provide information on what the authors of these materials felt to be important information for vocational education teachers working with handicapped individuals. Based on their competency studies Phelps and Lutz (1977) have developed a book designed to help vocational and special education teachers learn to cooperatively plan, implement, and evaluate vocational programs for handicapped students.

The American Institute for Research in the Behavioral Sciences (AIR) has recently completed a series of projects funded through the Bureau of Education for the Handicapped resulting in three new publications. One project identified barriers to the vocational training and placement of the severely handicapped which have important implications for competencies needed by vocational educators (Cook, 1978). In another project, a Mainstreaming Guidebook for Vocational

Educators Teaching the Handicapped was published to provide vocational education teachers with resource information needed in order to include individuals with a wide variety of disabilities in their vocational classes. The book is organized around four basic competency/content areas: 1) making ready for the handicapped student - attitudes and environment; 2) individual assessment; 3) individualized education plan (IEP); and 4) curriculum modification (Dahl, 1978).

Another AIR project resulted in a series of seven modules designed for preservice or inservice training called Mainstreaming the Handicapped in Vocational Education. The module subject areas were entitled: 1) Developing a General Understanding; 2) Developing a Positive Attitude; 3) Serving the Mentally Retarded; 4) Serving the Visually Handicapped; 5) Serving the Orthopedically Handicapped; 6) Serving the Communication Impaired; and 7) Developing a Plan for Action. These modules, as well as other staff development materials mentioned, spend considerable space on giving the teacher information about different types of disabilities, despite the fact that such information is seldom mentioned in the competency lists developed by the various studies summarized above (Weisberger, 1977).

Tindall (1976) has developed a series of written and audio-visual instructional units designed to provide vocational teachers with knowledge and competencies needed to teach handicapped students. His modules stress attitude as well as specific information about varying disability groups. Explicit suggestions for modification of the vocational education program are given for each major disability group.

In reviewing the studies just summarized a number of issues exist that make more difficult the task of the teacher educator who wishes to use the competency lists as a basis for developing a program to meet the training needs of regular vocational educators working with handicapped persons. First, in the studies it is difficult to distinguish between studies directed at vocational teachers in

specialized, separate programs and vocational education teachers who might be teaching handicapped students in regular classes. Somewhat different competencies are probably needed in these two environments.

Secondly, the targeted groups are quite variable. Some studies focus on educable mentally retarded individuals, some on handicapped persons in general, and others on special needs students, a term that encompasses both handicapped and disadvantaged persons. Competencies needed to teach each of these target groups will likely be somewhat different.

Thirdly, the interplay between the competencies related to persons with specific disabilities, proficiency levels of competency performance, and vocational program related competencies make a detailed analysis of competencies complex. For instance, as the studies related to special education emphasize, different competencies are often needed in dealing with mentally retarded, emotionally disturbed, deaf students, et cetera. Additionally the needed level of proficiency for a given competency is often greater as the disability of an individual becomes more severe. The vocational education competency studies previously summarized have also indicated different kinds of competencies needed by the various types of vocational teachers (homemaking vs. industrial education, for example). Figure 3 below graphically illustrates the relationship between levels of proficiency, disability related competencies, and vocational program related competencies.

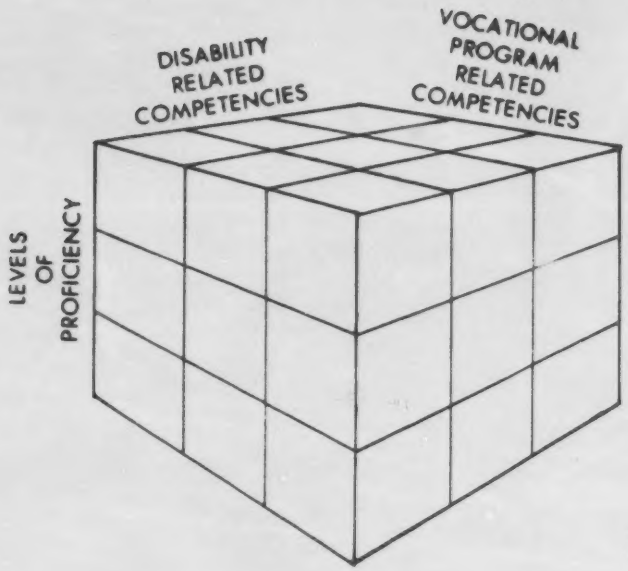

FIGURE 3
Relationship between levels of proficiency, disability related competencies, and vocational program related competencies

While most studies attempt to find "core" competencies common to all disability groups and all vocational programs, this is done only at the cost of more specific identification of needed skills. On the other hand, defining competencies in too specific a manner creates an unmanageable number of competency statements.

A fourth difficulty might be termed a problem of language. Competency statements do not appear in any common format, and many different ways of saying the same things exist from study to study. Specialized terms used primarily in vocational education, special education, or vocational rehabilitation make general understanding of the statements more difficult.

Fifth, there has been no study on a National level concerning specific competencies that regular vocational education teachers need to teach handicapped persons in regular classes. There have been some State level studies and studies have been implemented on a National level dealing with competencies needed in teaching special needs students. A study assessing the present state-of-the-art

and training needs based on a National sample of regular vocational education teachers would help in clarifying training needs for teacher educators and those responsible for personnel development.

Lastly, studies have not differentiated those competencies needed to train handicapped persons from competencies already possessed by vocational teachers. Therefore, it is difficult to ascertain what extra training is needed, over and above, that normally given a vocational education teacher, to aid the vocational teacher in successfully instructing disabled individuals.

Chapter 3

DESIGN OF THE STUDY

The major purpose of this project was to establish a data base which identified the specific training needs of vocational education instructional personnel who serve or will be serving handicapped students. The project also had as one of its objectives the dissemination of the results and products of the needs assessment survey. The National Needs Assessment Surveys were conducted to obtain information for the establishment of the data base.

METHODOLOGY

In order to develop a data base which would identify the specific training needs of vocational personnel for working with the handicapped, it was necessary to conduct two National Needs Assessment Surveys of vocational teachers and vocational teacher educators including all seven vocational instructional program areas. To obtain the training needs data from the incumbent vocational educators, two needs assessment survey questionnaires and corresponding computer programs were designed to provide a discrepancy analysis between the actual performance level and the desired performance level of the respondents in relation to the identified competencies and knowledges essential to meeting the vocational instructional needs of the handicapped.

The competency and knowledge statements comprising the two surveys were identified by a previous project, Personnel Training Requirements To Serve Handicapped Populations, ED Contract Number 300-78-0571 using a Delphi technique.

The Delphi technique as a means of collecting data was developed by Dalkey and Helmer during the mid-1950's while they were working with the Rand Corporation. The idea for the technique surfaced as the researchers noted the necessity of developing a method of soliciting group opinion with reliable results

for the purpose of forcasting future developments or events. The Delphi technique for data collection became popular during the 1960's when many corporations became conscious of the need for long-range planning.

Three identical questionnaires were prepared by the previous project to identify the ninety-six competency and knowledge statements which were used in the two National Needs Assessment Surveys conducted by this project. Two advisory committees of nine members each were selected to assist in the development of the questionnaires via the Delphi technique. One advisory committee was representative of vocational educators at the State and local levels and the other advisory committee represented educators who had experience in working with the handicapped at the State and local levels.

Two sets of competency and knowledge statements were developed from a review of literature concerning: 1) those needed for conducting vocational instructional programs excluding technical skills; and 2) those that would assist vocational instructors in assuring that handicapped students have equal access and opportunity in vocational education programs. One set of competencies and knowledges was reviewed by a nine-member Vocational Technical Advisory Committee; while the second set was reviewed by a nine-member Special Education Advisory Committee. A discrepancy profile was then prepared by comparing the two sets of competencies and knowledges. Therefore, the discrepancy profile identified the unique competencies and knowledges necessary for vocational teachers to instruct handicapped students. These unique competencies and knowledges were used as the basis for the three questionnaires that were developed. These three questionnaires were:

1. Needs Assessment Survey of Vocational Teachers;
2. Needs Assessment Survey of Vocational Teacher Educators; and
3. Needs Assessment Survey of Vocational Administrators.

The three questionnaires were identical and were intended for three populations--vocational teachers, vocational teacher educators, and vocational administrators. However, only two populations were approved by the Federal Education Data Committee/Office of Management and Budget to respond to the questionnaires. These two populations were vocational teachers and teacher educators. Camera-ready copies of the two questionnaires were provided to Educational Innovators, Inc. to conduct the National Needs Assessment Surveys.

Names and addresses of the populations to be surveyed were obtained by the project staff from the Vocational Educational Personnel Development (VEPD) Coordinators from each of the fifty States and Puerto Rico. Using the names and addresses provided by the VEPD Coordinators, questionnaires were mailed to 1,446 vocational teachers and 206 vocational teacher educators. Three follow-ups were conducted in order to obtain the desired number of useable returns.

Each person receiving a copy of the questionnaire was requested to rank each competency and knowledge statement from one (low) to five (high) concerning their present performance ability. Each person in the sample population was also asked to rank their desired performance level for each competency/knowledge statement from one (low) to five (high). The two rating for each respondent for each competency and knowledge statement on the questionnaire was entered into the computer for processing. The difference between the actual and desired performance ability was converted to a need index. The ratings of all respondents for each competency and knowledge statement was adjusted to provide a need index for each statement for each of the respondent groups.

POPULATION

The population for this survey consisted of vocational teachers and vocational teacher educators from the 50 States and Puerto Rico representing all seven vocational instructional program areas. It was determined, using proven

sampling procedures, that a sample of 384 vocational teachers would be sufficient for a valid needs assessment survey. However, a proportional, stratified sample of 1,446 teachers and 206 teacher educators were asked to respond to the needs assessment survey.

Using whole, round numbers, the percentage of vocational teachers per instructional program area was determined by dividing the number of vocational teachers in each program area by the total number of vocational teachers for all of the vocational program areas in the Nation. The size of the sample for the vocational teachers by program was: 1) Agriculture, 98 teachers; 2) Distributive, 116 teachers; 3) Health Occupations, 126 teachers; 4) Home Economics, 297 teachers; 5) Office, 298 teachers; 6) Technical, 81 teachers; and 7) Trade and Industrial, 430 teachers. The size of the sample for the vocational teacher educators by program area was: 1) Agriculture, 15; 2) Distributive, 14; 3) Health Occupations, 15; 4) Home Economics 51; 5) Office, 43; 6) Technical, 13; and Trade and Industrial, 54. Useable returns consisted of 622 vocational teacher respondents and 123 vocational teacher educator respondents.

DATA ORGANIZATION

An adjusted need index was computed for each competency and knowledge statement for the vocational teacher respondents for each of the vocational instructional program areas, as well as for the teacher educator respondents for each of the vocational instructional program areas. Therefore the priority lists for training needs for each of the vocational instructional program areas was prepared for both the vocational teachers and the vocational teacher educators. Each of the priortized lists of training needs were prepared by ranking each competency and knowledge statement from high to low by need index.

This organization of the data is analyzed and interpreted in Chapter 5. This organization and presentation of the data will provide the reader with a graphic

description of the priorities of the vocational education personnel development needs for working with the handicapped.

This also provided data concerning the mean of the present development level rating and the mean of the desired rating for each competency and knowledge statement for each group, as well as the weighted need index across all groups. The frequency and percent for both the present performance ability and the desired performance level was reported for each vocational program area.

Chapter 4

PRESENTATION OF DATA

The data from two groups of the survey respondents were analyzed with computer assistance using a discrepancy analysis program to compute a need index for each of the 65 competency and 31 knowledge statements. The computer program was designed and tested for reliability to produce computer generated tables for the 96 competency and knowledge statements. The data on the computer generated tables were analyzed and arranged in order to priortize the vocational education personnel development training needs for working with the handicapped. The analysis of the data is presented in a variety of tables to best communicate the findings or results of this project--a data base for the professional improvement or preparation of vocational education instructional personnel to work with mainstreamed, handicapped students.

LEVELS OF COMPETENCY DEVELOPMENT BY TEACHER FUNCTION

During the identification of the competencies considered as being unique for vocational instructional personnel to work with the handicapped, the competency and knowledge statements were categorized by teacher function. Teacher functions are used to classify the performance areas for the occupation of teaching. Some writers use the term "function" synonymously with "occupational division" and "performance area" when doing an occupational analysis. Courses of instruction for the preparation of vocational education personnel have been developed respectively using teacher functions.

Comparisons of perceived levels of competency development and desired levels of competency development are presented in Tables 3 through 6. A comparison, by mean need index, of all responding vocational teacher's present level of competency and desired level of competency by teacher function is presented in

TABLE 3

Comparison of vocational teachers present level of competency and knowledge development with their desired level of competency and knowledge development by teacher function

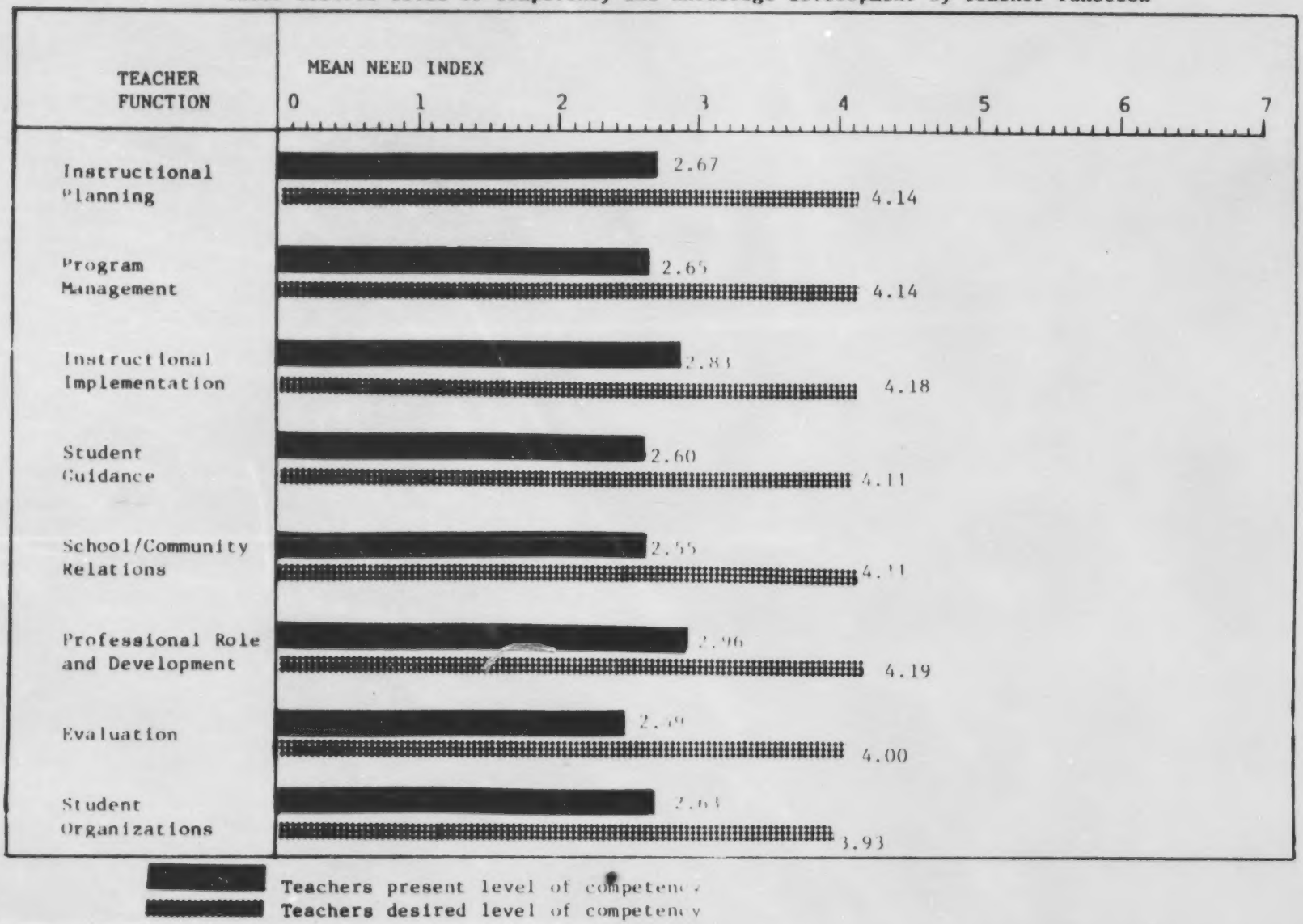

TABLE 4

Comparison of vocational teachers desired level of competency and knowledge development with the vocational teacher educators desired level of program competency and knowledge development by teacher function

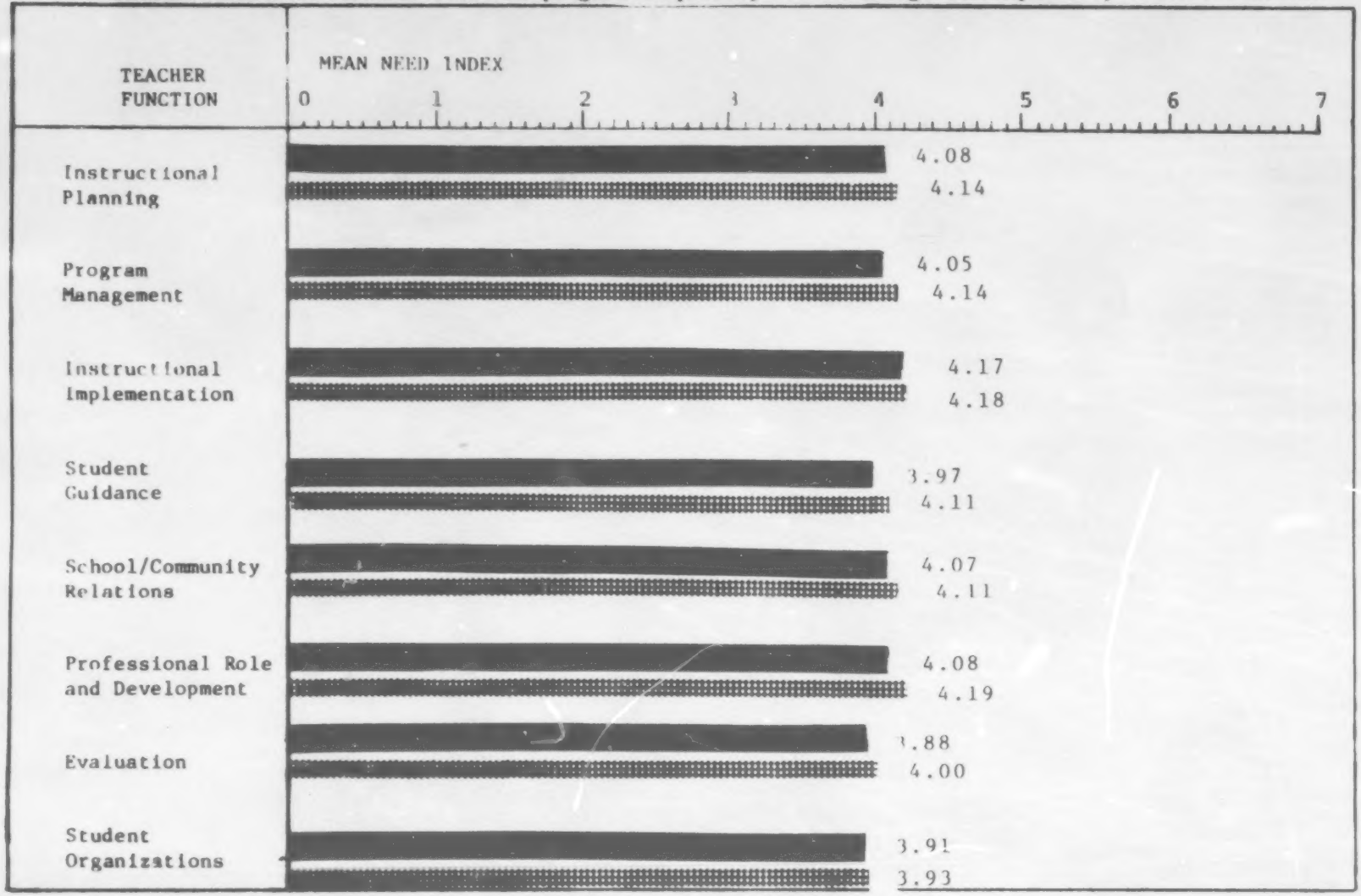

TABLE 5

Comparison of vocational teacher educators present level of program competency and knowledge development with their desired level of program competency and knowledge development by teacher function

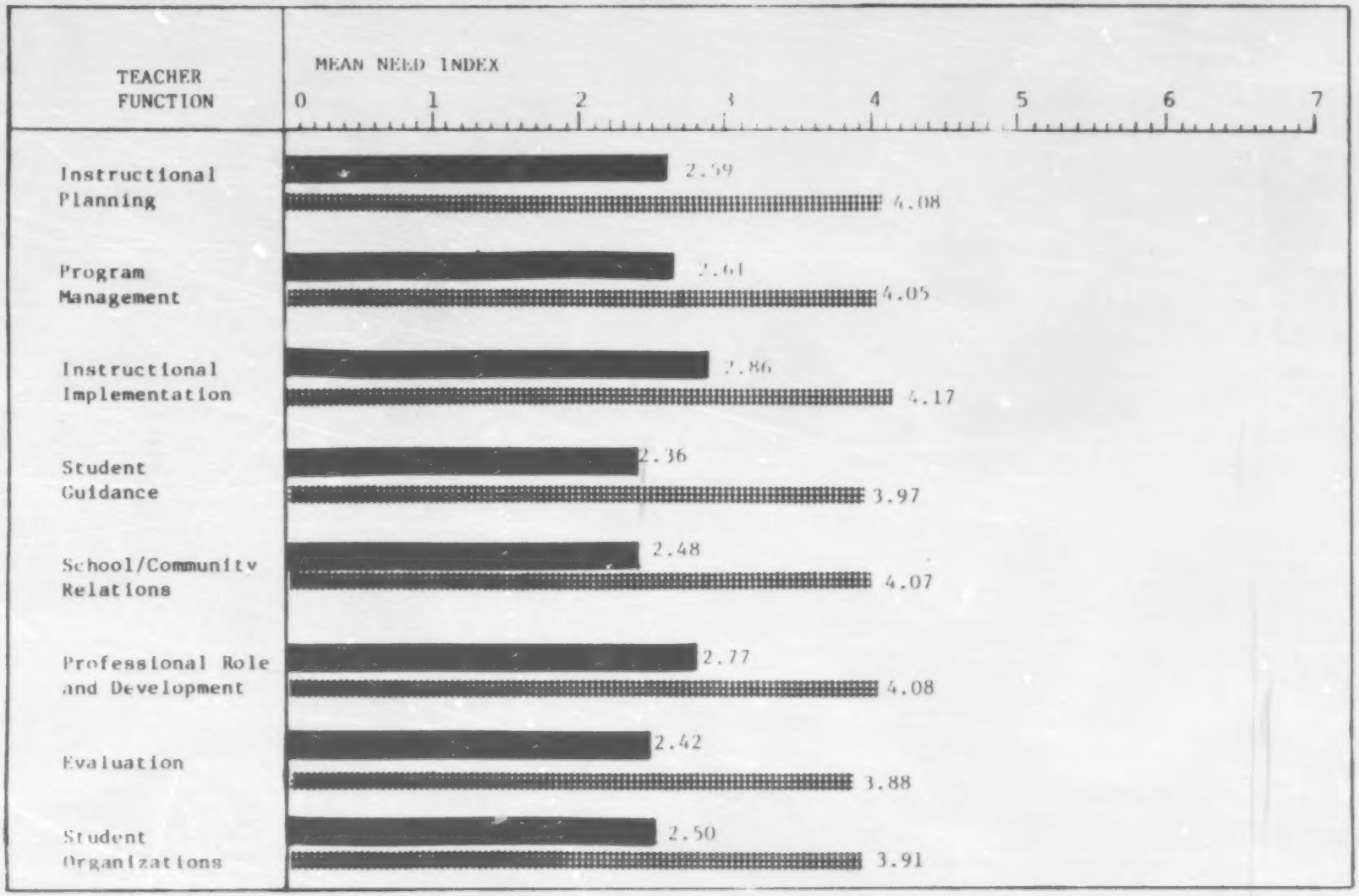

TABLE 6

Comparison of vocational teachers present level of competency and knowledge development with vocational teacher educators desired level of program competency and knowledge development by teacher function

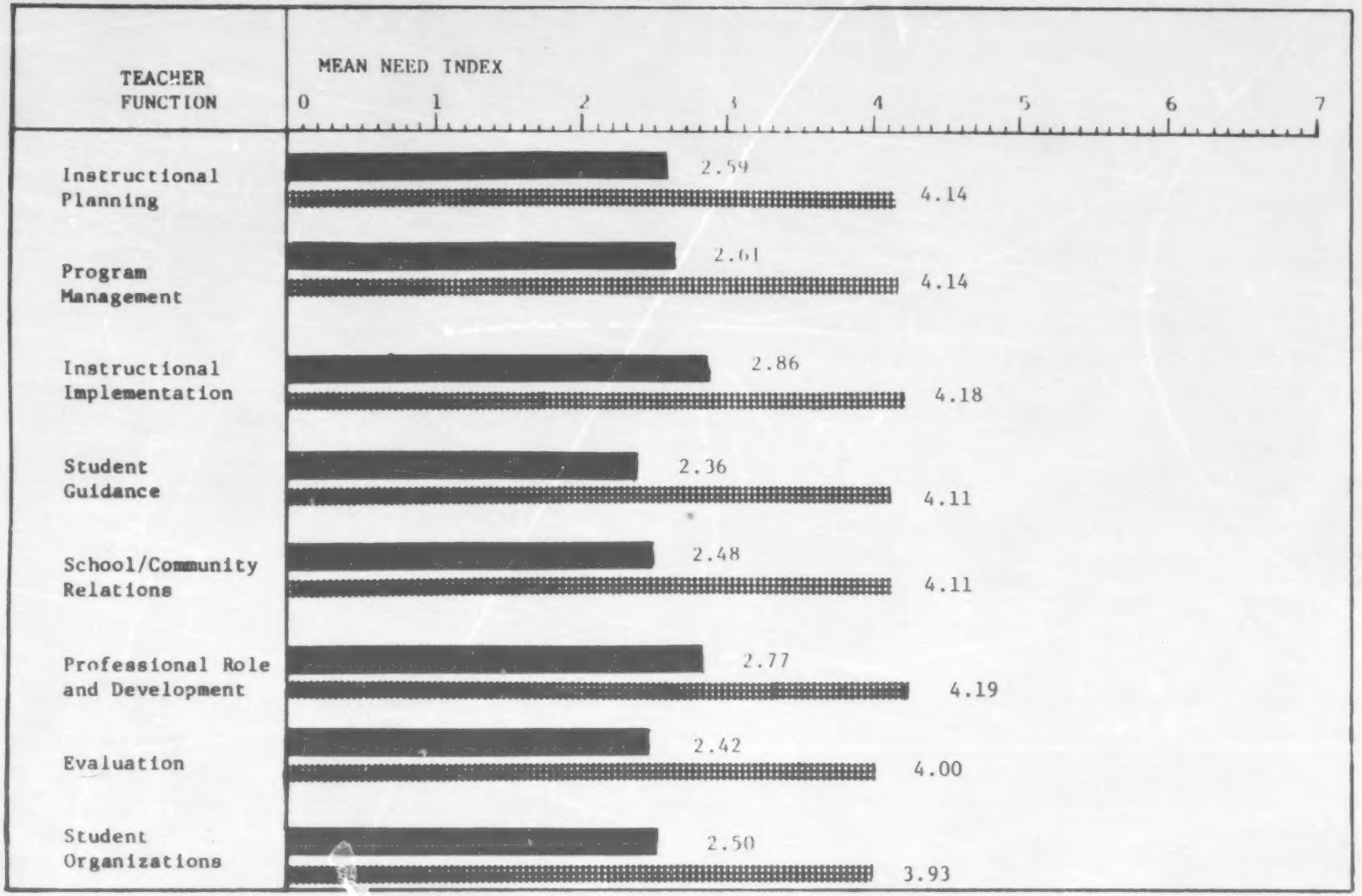

Table 3. The need for professional improvement of incumbent vocational teachers to meet the needs of mainstreamed, handicapped students can easily be observed by looking at the differences of perceived levels of development. Table 3 shows that vocational teachers desire professional improvement concerning all teacher functions in order to meet the needs of the handicapped. When the needs for professional improvement of vocational personnel were priortized by teacher function, they were ranked in the following order:

1. School and Community Relations;
2. Student Guidance;
3. Evaluation;
4. Program Management;
5. Instructional Planning;
6. Instructional Implementation;
7. Student Organizations; and
8. Professional Role and Development.

The priortization was arrived at by subtracting the vocational teachers mean need index, present level of competency and knowledge development from their mean need index, desired level of competency and knowledge developed for each of the eight teacher functions.

Table 4 presents a comparison of the present level of program competency and knowledge development of all responding vocational teacher educators with their desired level of program competency and knowledge development by teacher function. Table 4 indicates that the greatest desired need of vocational teacher education programs, is for the teacher function of Student Guidance. This need was derived as the greatest priority by subtracting the vocational teacher educators mean need index, present level of competency and knowledge development from their mean need index, desired level of competency and knowledge development for each of the eight

teacher functions. In this manner the needs for professional improvement of teacher education programs were ranked as follows:

1. Student Guidance;
2. School/Community Relations;
3. Instructional Planning;
4. Evaluation;
5. Program Management;
6. Student Organizations;
7. Instructional Implementation; and
8. Professional Role and Development.

The function of Instructional Implementation had the highest level of desired competency and knowledge development and also the highest level of present competency and knowledge development.

By comparing the desired level of competency and knowledge development for each teacher function area as provided by teachers and teacher educators and shown in Tables 3 and 4, Table 5 was produced.

Table 5 shows that the desired levels of competency and knowledge development by teacher function are very similar for both the responding vocational teachers and the responding vocational teacher educators. This similarity is most pronounced considering that both groups have a desire for professional improvement to meet the needs of the handicapped. The greatest difference in desire for professional improvement between vocational teachers and teacher educators was for the function of Student Guidance calculated at .14. This difference was calculated by subtracting the mean need index desire of vocational teachers, 3.97, from the mean need index, desire for teacher educators, 4.11. The differences in desire for professional improvement are priortized below beginning with the greatest difference:

1.	Student Guidance	.14
2.	Evaluation	.12
3.	Professional Role and Development	.11
4.	Program Management	.09
5.	Instructional Planning	.06
6.	School/Community Relations	.04
7.	Student Organizations	.02
8.	Instructional Implementation	.01.

Table 6 presents a comparison of the vocational teachers mean need index, desired level of competency and knowledge development with the vocational teacher educators mean need index, present level of program competency and knowledge development. The greatest difference in the present level of competency and knowledge development in teacher education programs and the desired level of competency and knowledge development for the vocational teachers was for the teacher function of Student Guidance. The differences in current teacher education program offerings and teacher desires are priortized below beginning with the greatest difference.

Student Guidance	1.75
School/Community Relations	1.63
Evaluation	1.58
Instructional Planning	1.55
Program Management	1.53
Student Organizations	1.43
Professional Role & Development	1.42
Instructional Implementation	1.32.

The presentation of the data in Table 6 provides a strong indication of the need for teacher education activities to meet the desired level of development by the responding vocational teachers. As the table shows, the desired level of

TABLE 7

Desired level of development of all vocational teachers priortized by need index
N = 622

Competency and Knowledge Statement and Number	Need Index
83. How to interpret reports of other professionals such as psychological evaluations, etc.	7.48
73. Career opportunities for the handicapped student.	7.22
22. Identify and provide orientation for potential employers by handicapped students.	7.11
72. Knowledge of suitable job placement for handicapped students.	7.07
89. Job requirements in occupations applicable to the handicapped.	6.95
91. Federal and state laws concerning vocational education, vocational rehabilitation, and special education.	6.94
92. Causes for and results of low self-esteem for a handicapped individual.	6.82
90. Differing capabilities of handicapped students relative to the severity of their disability.	6.78
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	6.73
81. Methods and procedures to identify needs and interests of handicapped students.	6.72
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.71
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	6.69
71. Knowledge of behavior modification techniques concerning handicapped students.	6.57
54. Use diagnostic/descriptive assessment techniques for planning instruction.	6.49

TABLE 7

(Continued)

Competency and Knowledge Statement and Number	Need Index
74. Machinery, tool and physical facility modifications for handicapped students.	6.48
19. Assist in developing suitable job placement for handicapped students.	6.47
68. Knowledge of appropriate referral sources for handicapped students.	6.46
76. Physical and sensory limitations of handicapped persons.	6.46
79. Related services to provide the total quality aspects of a program for handicapped students.	6.44
10. Assist the handicapped students in viewing his/her assets and limitations realistically.	6.43
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, etc.	6.43
87. How to recognize students with learning problems in regular class.	6.42
13. Counsel parents/guardians of handicapped students regarding their child's vocational education/career plans.	6.41
55. Identify the services needed to increase handicapped students' chances in regular programs.	6.39
9. Assist handicapped students in developing social, physical, and emotional security for future employment.	6.38
18. Assess the ability of the handicapped individual to modify his/her behavior.	6.37
35. Translate statements describing physical/sensory limitations into statements concerning instructional limitations.	6.37
93. Behavior observation skills for handicapped students.	6.36

TABLE 7

(Continued)

Competency and Knowledge Statement and Number	Need Index
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	6.33
77. Procedure to sequence tasks to conform with learning styles, etc., of handicapped students.	6.28
25. Utilize a variety of teching methods and techniques to provide instruction for handicapped students.	6.26
1-. Interpret occupational tests and inventories to students.	6.23
78. Procedures to modify jobs.	6.22
33. Develop an awareness of how to recognize students with learning problems in the regular class.	6.22
21. Assist parents and other teachers in interpreting vocational programs/services for handicapped students.	6.18
23. Cooperate with appropriate agencies/groups in identifying career opportunities for handicapped students.	6.17
80. Appropriate expectations for the performance of handicapped persons.	6.17
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	6.15
52. Utilize information obtained from related disciplines about the sensory, etc., abilities of students to progress.	6.12
75. Methods/procedures to utilize resource personnel related to handicapped students.	6.11

TABLE 7

(Continued)

Competency and Knowledge Statement and Number	Need Index
58. Determine appropriate techniques for evaluating the per- formance of students with specific handicaps.	6.08
42. Assist in a long range plan for integrating the handicapped student into the vocational educational program.	6.04
49. Select, adapt, or develop instructional materials for use with handicapped students.	6.04
82. Learner selection of criteria to assure accessibility of handicapped students.	6.04
12. Advise and counsel handicapped person relative to personal and professional goals.	6.02
24. Influence attitudes of regular school personnel/students toward accepting handicapped students.	6.01
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential.	6.00
6. Analyze personal and professional abilities and limitations in . providing instruction to handicapped persons.	5.99
61. Conduct a comprehensive evaluation of the total vocational program for needs of handicapped students.	5.94
37. Provide teaching strategies/delivery systems based upon individual learning styles/abilities of students.	5.94
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	5.93
33. Develop a procedure for fulfilling an individual instruct- ional prescription in the classroom/laboratory.	5.92

TABLE 7

(Continued)

Competency and Knowledge Statement and Number	Need Index
88. Individualized education plan (IEP) for handicapped students.	5.90
50. Develop instructional units revolving around job-specific concepts and skills and needs/abilities of handicapped.	5.90
41. Modify/adapt when necessary the tools, equipment/facilities/ conditions in the learning environment.	5.89
34. Select cooperative training stations for individual handicapped learners.	5.87
20. Assist each handicapped student to develop and maintain a positive self-concept.	5.86
59. Develop behavior observation skills concerning handicapped students.	5.86
60. Obtain follow-up information on handicapped students learning or graduating from school programs.	5.86
56. Assist in the development of individualized education programs (IEP) for handicapped students.	5.80
43. Define appropriate expectations for laboratory cooperative work performance of handicapped persons.	5.76
48. Develop instructional activities by clustering/sequencing related tasks according to student's needs.	5.71
3. Use and supervise service personnel in providing vocational training for handicapped persons.	5.70
32. Modify instructional materials and equipment for individual handicapped learners's needs.	5.67
44. Identify needs and interests of the handicapped student.	5.65

TABLE 7
(Continued)

Competency and Knowledge Statement and Number	Need Index
16. Assist handicapped students in developing good study habits related to vocational training.	5.62
47. Develop an integrated program for each handicapped student in cooperation with special education teachers.	5.59
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	5.56
95. Leadership roles for handicapped student in vocational organizations.	5.54
15. Develop two way communication during conferences with handicapped students.	5.53
46. Revise selection criteria to ensure program accessibility for handicapped student.	5.51
85. Devising flexible time limits based upon individual rates of progress.	5.46
39. Develop appropriate attitudes of non-handicapped students toward handicapped student.	5.45
66. Knowledge of barriers that have inhibited training and employment of handicapped persons.	5.45
45. Conduct parent/teacher conferences for planning instructional programs.	5.42
94. How to integrate and actively involve handicapped students into student vocational organizations.	5.37
27. Apply individual instructional prescriptions to all handicapped pupils in class.	5.36
96. Role and importance of student organizations in the development of handicapped persons.	5.28
17. Conduct a purposeful home and community visit for each handicapped student.	5.27
57. Evaluate a studet's performance according to the objectives on the individualized education plan (IEP).	5.21

TABLE 7

(Continued)

Competency and Knowledge Statement and Number	Need Index
28. Use the basic principles of learning theory/behavior modification related to vocational instruction (handicapped).	5.21
64. student vocational organizations.	5.17
65. Provide handicapped students with opportunities for a wide range of social experiences through voc. organizations.	5.16
38. Revise methods of performing tasks.	5.14
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	5.12
7. problems of the handicapped student.	5.07
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.96
4. Identify and participate in professional organizations concerned with handicapped persons.	4.94
1. Identify types of barriers that have inhibited training and employment of handicapped persons.	4.94
63. Integrate/actively involve handicapped students in an on- going student vocational organization.	4.91
51. Devise flexible time limits based upon individual rates of progress.	4.85
8. Refer students with special problems to appropriate sources	4.70
62. Demonstrate personal commitment concerning handicapped students' participation in vocational organizations.	4.41
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.30
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped student.	4.29

TABLE 7

(Continued)

Competency and Knowledge Statement and Number	Need Index
29. Interact positively and naturally with the handicapped student.	3.61

development of the vocational teachers is much higher than the actual level of development being provided by the teacher education institutions as perceived by the responding vocational teacher educators.

TRAINING NEED PRIORITIES

Priorities for vocational personnel improvement needs for working with mainstreamed, handicapped students are presented in Tables 7 through 15. These tables provide an opportunity for the reader to observe the desired levels of competency and knowledge development of the respondents of each vocational instructional program area. Each of these tables show the 96 competency and knowledge statements ranked in priority from the highest need index to the lowest need index.

The need index concerning the desired level of development of vocational teacher respondents across all vocational program areas for the 96 competency and knowledge statements ranged from a high of 7.48 to a low of 3.61. The training priorities for the competency and knowledge statements for all program areas combined is presented in Table 7. Of the 96 statements, 50 percent of the statements had a need index ranging from 5.99 to 7.48. Statement 83 had the highest need index, 7.48, and concerned how to interpret reports of other professionals such as psychological evaluations, et cetera. The lowest need index, 3.61, concerned competency statement 29 which was how to interact positively and naturally with the handicapped student.

There were a total of 31 competency/knowledge statements from the teacher function of Instructional Planning on the survey questionnaire. Sixteen of these 31 statements were rated with a need index of 5.99 or higher on Table 7. The next highest number of statements by teacher function ranked in the upper 50 percentile on Table 7 were 9 statements from the teacher function of Student Guidance.

Table 8 presents the training priorities by need index, for each of the competency and knowledge statements of respondents of vocational agriculture teachers. The highest need index for teachers of vocational agriculture was 6.99 for statement number 13 dealing with counseling parents/guardians of handicapped students regarding their child's vocational education and career plans. The lowest need index for the teachers of vocational agriculture was 2.60 for competency statement 62 related to demonstrating a personal commitment concerning handicapped students' participation in student vocational organizations. The need index of 2.60 was the lowest need index computed for all of the vocational teacher respondents. Only competency statement 62, shown in Table 8, had a need index below 3.0. There were eight competency and knowledge statements that had a need index below 4.00 for the vocational agriculture teacher respondents:

46. Revise selection criteria to ensure program accessibility for handicapped students.

63. Integrate and actively involve handicapped students into an ongoing student vocational organization.

57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).

29. Interact positively and naturally with the handicapped student.

96. Role and importance of student organizations in the development of handicapped persons.

95. Leadership roles for handicapped students in vocational organizations.

94. How to integrate and actively involve handicapped students into student vocational organizations.

62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organization.

On the priortized list for the agriculture teacher respondents, 50 percent of the competency/knowledge statements had a need index of 4.74 and higher. Fourteen of the forty-eight statements having a need index of 4.74 and higher were from the teacher function of Instructional Planning. Eleven of the nineteen competency and knowledge statements were from the teacher function of Instructional Implementation.

TABLE 8

Desired level of development of agriculture teachers priortized by need index
N = 46

Competency and Knowledge Statement and Number	Need Index
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	6.99
12. Advise and counsel handicapped persons relative to personal and professional goals.	6.18
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	6.18
22. Identify and provide orientation for potential employers of handicapped students.	6.17
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	6.13
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.08
89. Job requirements in occupations applicable to the handicapped.	6.07
83. How to interpret reports of other professionals such as psychological evaluation, audiologists, ophthalomologists, et cetera.	6.07
20. Assist each handicapped student to develop and maintain a positive self-concept.	5.97
15. Develop two-way communication during conferences with handicapped students.	5.94
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	5.93
73. Career opportunities for the handicapped student.	5.91
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	5.87
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped student.	5.69

TABLE 8

(Continued)

Competency and Knowledge Statement and Number	Need Index
92. Causes for and results of low self-esteem for a handicapped individual.	5.66
90. Differing capabilities of handicapped students relative to the severity of their disability.	5.66
19. Assist in developing suitable job placement for handicapped students.	5.60
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	5.58
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	5.57
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	5.56
76. Physical and sensory limitations of handicapped persons.	5.53
27. Apply individual instructional prescription to all handicapped pupils in class.	5.42
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	5.42
78. Procedures to modify jobs.	5.41
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	5.36
14. Interpret occupational tests and inventories to students.	5.31
88. Individualized education plan (IEP) for handicapped students.	5.24
93. Behavior observation skills for handicapped students.	5.24

TABLE 8

(Continued)

Competency and Knowledge Statement and Number	Need Index
18. Assess the ability of the handicapped individual to modify his/her behavior.	5.23
80. Appropriate expectations for the performance of handicapped persons.	5.18
32. Modify instructional materials and equipment for individual handicapped learner's needs.	5.15
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	5.15
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	5.14
16. Assist handicapped students in developing good study habits related to vocational training.	5.12
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of ther handicapped student.	5.10
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	5.09
44. Identify needs and interersts of the handicapped student.	5.09
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	5.05
17. Conduct a purposeful home and community visit for each handicapped student.	5.02
45. Conduct parent/teacher conferences for planning instructional programs.	5.01
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	5.00

TABLE 8

(Continued)

Competency and Knowledge Statement and Number	Need Index
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped student.	4.99
7. Communicate effectively with other professionals to solve problems of the handicapped student.	4.97
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	4.94
34. Select cooperative training stations for individual handicapped learners.	4.94
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	4.82
81. Methods and procedures to identify needs and interests of handicapped students.	4.80
79. Related services to provide the total quality aspects of a program for handicapped students.	4.74
59. Develop behavior observation skills concerning handicapped students.	4.66
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	4.66
50. Develop instructional units revolving around job specific concepts and skills and the needs and abilities of handicapped students.	4.63
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.62
49. Select, adapt, or develop instructional materials for use with handicapped students.	4.56.
56. Assist in the development of individualized education programs (IEP) for handicapped students.	4.56

TABLE 8

(Continued)

Competency and Knowledge Statement and Number	Need Index
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	4.55
53. Develop an awareness of how to recognize students with learning problems in the regular class.	4.55
72. Knowledge of suitable job placement for handicapped student.	4.54
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	4.54
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.49
74. Machinery, tool and physical facility modification for handicapped student.	4.49
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	4.48
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	4.48
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	4.44
38. Revise methods of performing tasks.	4.43
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped student.	4.38
51. Devise flexible time limits based upon individual rates of progress.	4.31
82. Learner selection of criteria to assure accessibility of handicapped students.	4.26
3. Use and supervise service personnel in providing vocational training for handicapped persons.	4.25

TABLE 8

(Continued)

Competency and Knowledge Statement and Number	Need Index
85. Devising flexible time limits based upon individual rates of progress.	4.24
75. Methods and procedures to utilize resource personnel related to handicapped students.	4.20
8. Refer students with special problems to appropriate sources.	4.16
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	4.15
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	4.09
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	4.09
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	4.02
4. Identify and participate in professional organizations concerned with handicapped persons.	4.02
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	4.01
46. Revise selection criteria to ensure program accessibility for handicapped students.	3.91
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	3.83
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	3.70
29. Interact positively and naturally with the handicapped student.	3.63

TABLE 8

(Continued)

Competency and Knowledge Statement and Number	Need Index
96. Role and importance of student organizations in the development of handicapped persons.	3.45
95. Leadership roles for handicapped student in vocational organizations.	3.34
94. How to integrate and actively involve handicapped students into student vocational organizations.	3.31
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	2.60

The training priorities for distributive education teachers are presented in Table 9. The desired levels of development by need index of the distributive education teachers ranged from a high of 8.46 to a low of 4.45. There were 25 or 26 percent, of the 96 statements that had a need index of 7.00 and higher. Competency statement 53, the highest priority for training, concerned developing an awareness of how to recognize students with learning problems in the regular class. The lowest training priority, competency statement 4, dealt with identifying and participating in professional organizations concerned with handicapped persons.

There were 50 percent of the 96 competency and knowledge statements which had a need index of 6.55 or higher for the distributive education teacher respondents. Of the 48, or 50 percent, competency and knowledge statements having a need index of 6.55 or higher, 24 were from the teacher function of Instructional Planning and 8 were from the teacher function of Instructional Implementation.

Three of the 5 competency and knowledge statements from the teacher function of School/Community Relations on the questionnaire were rated by the distributive education teacher respondents above the need index of 6.55. The 3 competency and knowledge statements from the teacher function of School/Community Relations having a need index of 6.55 and higher were:

21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.

22. Identify and provide orientation for potential employers of handicapped students.

73. Career opportunities for the handicapped student.

TABLE 9

Desired level of development of distributive education teachers priortized by need index N = 50

Competency and Knowledge Statement and Number	Need Index
53. Develop an awareness of how to recognize students with learning problems in the regular class.	8.46
71. Knowledge of behavior modification techniques concerning handicapped students.	7.75
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	7.67
73. Career opportunities for the handicapped student.	7.56
80. Appropriate expectations for the performance of handicapped persons.	7.50
68. Knowledge of appropriate referral sources for handicapped students.	7.45
7. Communicate effectively with other professionals to solve problems of the handicapped student.	7.34
81. Methods and procedures to identify needs and interests of handicapped students.	7.34
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	7.31
87. How to recognize students with learning problems in regular class.	7.31
49. Select, adapt, or develop instructional materials for use with handicapped students.	7.29
20. Assist each handicapped student to develop and maintain a positive self-concept.	7.25
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	7.25
18. Assess the ability of the handicapped individual to modify his/her behavior.	7.24

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
76. Physical and sensory limitations of handicapped persons.	7.23
32. Modify instructional materials and equipment for individual handicapped learner's needs.	7.20
74. Machinery, tool, and physical facility modifications for handicapped students.	7.20
90. Differing capabilities of handicapped students relative to the severity of their disability.	7.20
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	7.16
79. Related services to provide the total quality aspects of a program for handicapped students.	7.11
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	7.09
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	7.07
92. Causes for and results of low self-esteem for a handicapped individual.	7.07
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	7.06
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	7.00
84. How to cluster and sequence related tasks according to individual handicapped student's ability and needs.	6.98
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	6.96

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
22. Identify and provide orientation for potential employers of handicapped students.	6.95
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.93
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	6.87
44. Identify needs and interests of the handicapped student.	6.86
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	6.83
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.83
91. Federal and State laws concerning vocational education, and special education.	6.82
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	6.78
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	6.77
88. Individualized education plan (IEP) for handicapped students.	6.74
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	6.70
89. Job requirements in occupations applicable to the handicapped.	6.69
38. Revise methods of performing tasks.	6.66

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	6.64
59. Develop behavior observation skills concerning handicapped students.	6.64
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	6.63
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	6.59
78. Procedures to modify jobs.	6.59
93. Behavior observation skills for handicapped students.	6.57
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	6.56
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	6.55
56. Assist in the development of individualized education programs (IEP) for handicapped students.	6.54
96. Role and importance of student organizations in the development of handicapped persons.	6.48
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	6.45
16. Assist handicapped students in developing good study habits related to vocational training.	6.46
46. Revise selection criteria to ensure program accessibility for handicapped students.	6.46

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	6.37
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	6.34
64. Prepare handicapped students for leadership roles in student vocational organizations.	6.32
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	6.27
85. Devising flexible time limits based upon individual rates of progress.	6.27
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	6.26
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	6.25
14. Interpret occupational tests and inventories to students.	6.21
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	6.20
75. Methods and procedures to utilize resource personnel related to handicapped students.	6.13
82. Learner selection of criteria to assure accessibility of handicapped students.	6.12
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	6.07

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
27. Apply individual instructional prescription to all handicapped pupils in class.	6.06
51. Devise flexible time limits based upon individual rates of progress.	6.06
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.04
95. Leadership roles for handicapped students in vocational organizations.	6.04
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	6.00
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	6.00
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	5.81
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	5.80
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	5.75
19. Assist in developing suitable job placement for handicapped students.	5.73
15. Develop two-way communication during conferences with handicapped students.	5.72
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	5.72

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabili- tation and mental health department.	5.71
66. Knowledge of barriers (i.e., attitudinal, architecrural, et cetera) that have inhibited training and employment of handicapped persons.	5.69
3. Use and supervise service personnel in providing vocational training for handicapped persons.	5.64
45. Conduct parent/teacher conferences for planning instructional programs.	5.55
17. Conduct a purposeful home and community visit for each handicapped student.	5.43
5. Maintain ethical and legal standards appropriate for working with handicapped students.	5.34
8. Refer students with special problems to appropriate sources.	5.34
34. Select cooperative training stations for individual handicapped learners.	5.33
7. Communicate effectively with other professionals to solve problems of the handicapped student.	5.30
12. Advise and counsel handicapped persons relative to personal and professional goals.	5.25
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	5.25
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	5.17
94. How to integrate and actively involve handicapped students into student vocational organizations.	5.17

TABLE 9

(Continued)

Competency and Knowledge Statement and Number	Need Index
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	5.12
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	4.80
29. Interact positively and naturally with the handicapped student.	4.69
4. Identify and participate in professional organizations concerned with handicapped persons.	4.45

Table 10 presents the priorities for the responding health occupations teachers. The vocational program area of health occupations teachers had the highest need index of all the seven vocational instructional program areas. Knowledge statement 89 dealing with job requirements in occupations applicable to the handicapped, had a need index of 8.94. The lowest need index recorded for the health occupations teacher respondents was 4.23 for competency statement number 29. Competency statement 29 concerned interacting positively and naturally with the handicapped student.

Of the 96 competency and knowledge statements on the questionnaire, 48, or 50 percent, of the statements were rated by the health occupations teachers with a need index of 6.80 or higher. Of the 48 competency and knowledge statements rated by the health occupations teacher respondents having a need index of 6.80 and higher, 20 of the statements were from the teacher function of Instructional Planning, and 9 were from the function of Instructional Implementation. All 5 of the competency and knowledge statements on the questionnaire and shown below from the teacher function of School/Community Relations were rated by the health occupational teacher respondents with a need index of 6.80 or higher:

21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.

22. Identify and provide orientation for potential employers of students.

23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped students.

24. Influence attitudes of regular school personnel and non-handicapped students toward acceptance of handicapped students.

73. Career opportunities for the handicapped students.

TABLE 10

Desired level of development of health occupations teachers priortized by need index
N = 65

Competency and Knowledge Statement and Number	Need Index
89. Job requirements in occupations applicable to the handicapped.	8.94
73. Career opportunities for the handicapped student.	8.59
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	8.57
72. Knowledge of suitable job placement for handicapped students.	8.31
22. Identify and provide orientation for potential employers of handicapped students.	8.22
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	8.00
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	7.99
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	7.94
19. Assist in developing suitable job placement for handicapped students.	7.92
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	7.81
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	7.80
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	7.71
68. Knowledge of appropriate referral sources for handicapped students.	7.68

TABLE 10

(Continued)

Competency and Knowledge Statement and Number	Need Index
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	7.62
82. Learner selection of criteria to assure accessibility of handicapped students.	7.61
79. Related services to provide the total quality aspects of a program for handicapped students.	7.55
34. Select cooperative training stations for individual handicapped learners.	7.50
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	7.50
53. Develop an awareness of how to recognize students with learning problems in the regular class.	7.47
14. Interpret occupational tests and inventories to students.	7.45
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	7.42
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	7.37
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	7.35
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	7.29
46. Revise selection criteria to ensure program accessibility for handicapped students.	7.29
74. Machinery, tool, and physical facility modifications for handicapped students.	7.23

TABLE 10

(Continued)

Competency and Knowledge Statement and Number	Need Index
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	7.21
75. Methods and procedures to utilize resource personnel related to handicapped students.	7.21
71. Knowledge of behavior modification techniques concerning handicapped students.	7.15
81. Methods and procedures to identify needs and interests of handicapped students.	7.13
87. How to recognize students with learning problems in regular class.	7.13
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	7.05
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	7.04
49. Select, adapt, or develop instructional materials for use with handicapped students.	7.02
56. Assist in the development of individualized education programs (IEP) for handicapped students.	7.01
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	7.00
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	7.00
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	7.00

TABLE 10

(Continued)

Competency and Knowledge Statement and Number	Need Index
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalomologists, et cetera.	6.94
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	6.93
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	6.87
45. Conduct parent/teacher conferences for planning instructional programs.	6.86
32. Modify instructional materials and equipment for individual handicapped learner's needs.	6.85
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.85
16. Assist handicapped students in developing good study habits related to vocational training.	6.84
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	6.83
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	6.80
95. Leadership roles for handicapped students in vocational organizations.	6.80
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	6.70
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	6.67
85. Devising flexible time limits based upon individual rates of progress.	6.65

TABLE 10

(Continued)

Competency and Knowledge Statement and Number	Need Index
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	6.64
78. Procedures to modify jobs.	6.64
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	6.58
94. How to integrate and actively involve handicapped students into student vocational organizations.	6.57
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	6.49
18. Assess the ability of the handicapped individual to modify his/her behavior.	6.49
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	6.44
80. Appropriate expectations for the performance of handicapped persons.	6.40
51. Devise flexible time limits based upon individual rates of progress.	6.39
38. Revise methods of performing tasks.	6.38
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	6.35
59. Develop behavior observation skills concerning handicapped students.	6.30
17. Conduct a purposeful home and community visit for each handicapped student.	6.27
6. Prepare handicapped students for leadership roles in student vocational organizations.	6.25

TABLE 10

(Continued)

Competency and Knowledge Statement and Number	Need Index
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	6.24
27. Apply individual instructional prescription to all handicapped pupils in class.	6.22
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	6.22
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	6.20
76. Physical and sensory limitations of handicapped persons.	6.14
15. Develop two-way communication during conferences with handicapped students.	6.10
3. Use and supervise service personnel in providing vocational training for handicapped persons.	6.09
20. Assist each handicapped student to develop and maintain a positive self-concept.	6.01
96. Role and importance of student organizations in the development of handicapped persons.	5.96
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	5.94
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	5.94
4. Identify and participate in professional organizations concerned with handicapped persons.	5.84
44. Identify needs and interests of the handicapped student.	5.80

TABLE 10

(Continued)

Competency and Knowledge Statement and Number	Need Index
12. Advise and counsel handicapped persons relative to personal and professional goals.	5.68
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	5.59
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	5.57
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	5.45
7. Communicate effectively with other professionals to solve problems of the handicapped student.	5.36
8. Refer students with special problems to appropriate sources.	5.15
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.98
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	4.90
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	4.67
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	4.38
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.28
29. Interact positively and naturally with the handicapped student.	4.23

The training priorities of the 142 responding home economics teachers are presented in Table 11. The highest need index for the home economics teachers was 8.17 and the lowest need index was 3.29. The 8.17 need index dealt with competency statement 83 which was how to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalomologists, et cetera. The lowest need index, 3.29 concerned interacting positively and naturally with the handicapped student.

Fifty percent of the competency and knowledge statements of the home economics teacher respondents had a need index of 6.27 and higher. None of the 7 competency and knowledge statements from the teacher function of Student Organization were rated by the home economics teacher respondents as having a need index as high as 6.27.

The 48 competency and knowledge statements having a need index of 6.27 or higher as rated by the home economics teacher respondents were distributed among 7 of the 8 teacher functions as follows: 1) 14 were from Instructional Planning; 2) 11 were from Instructional Implementation; 3) 10 were from the teacher function of Student Guidance; 4) 6 were from the function of Professinal Role and Development; 5) 4 were from School/Community Relations; 6) 2 were from Programs Management; and 7) 1 was from the teacher function of Evaluation. Only 2 of the statements in Table 11 had a need index below 4.00. These two competency statements were:

30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.
29. Interact positively and naturally with the handicapped student.

TABLE 11

Desired level of development of home economics teachers priortized by need index
N = 142

Competency and Knowledge Statement and Number	Need Index
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalomologists, et cetera.	8.17
72. Knowledge of suitable job placement for handicapped student.	8.04
18. Assess the ability of the handicapped individual to modify his/her behavior.	7.78
73. Career opportunities for the handicapped students.	7.63
22. Identify and provide orientation for potential employers of handicapped students.	7.57
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	7.39
14. Interpret occupational tests and inventories to students.	7.25
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	7.18
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	7.16
74. Machinery, tool, and physical facility modifications for handicapped students.	7.15
19. Assist the handicapped student in viewing his/her assets and limitations realistically.	7.14
89. Job requirements in occupations applicable to the handicapped.	7.14
90. Differing capabilities of handicapped students relative to the severity of their disability.	7.14
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	7.10

TABLE 11

(Continued)

Competency and Knowledge Statement and Number	Need Index
92. Causes for and results of low self-esteem for a handicapped individual.	7.08
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	7.03
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	6.98
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.95
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	6.94
71. Knowledge of behavior modification techniques concerning handicapped students.	6.93
19. Assist in developing suitable job placement for handicapped students.	6.92
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	6.88
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.83
78. Procedures to modify jobs.	6.81
79. Related services to provide the total quality aspects of a program for handicapped students.	6.81
3. Use and supervise service personnel in providing vocational training for handicapped persons.	6.80
76. Physical and sensory limitations of handicapped persons.	6.78

TABLE 11

(Continued)

Competency and Knowledge Statement and Number	Need Index
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	6.76
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	6.75
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	6.70
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	6.68
81. Methods and procedures to identify needs and interests of handicapped students.	6.68
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	6.63
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	6.62
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	6.59
75. Methods and procedures to utilize resource personnel related to handicapped students.	6.59
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	6.58
93. Behavior observation skills for handicapped students.	6.57
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	6.56

TABLE 11

(Continued)

Competency and Knowledge Statement and Number	Need Index
80. Appropriate expectations for the performance of handicapped persons.	6.56
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	6.54
12. Advise and counsel handicapped persons relative to personal and professional goals.	6.52
68. Knowledge of appropriate referral sources for handicapped students.	6.49
53. Develop an awareness of how to recognize students with learning problems in the regular class.	6.33
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	6.32
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	6.30
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	6.28
27. Apply individual instructional prescription to all handicapped pupils inclass.	6.27
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	6.26
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	6.22
34. Select cooperative training stations for individual handicapped learners.	6.22
87. How to recognize students with learning problems in regular class.	6.22

TABLE 11

(Continued)

Competency and Knowledge Statement and Number	Need Index
82. Learner selection of criteria to assure accessibility of handicapped students.	6.17
32. Modify instructional materials and equipment for individual handicapped learner's needs.	6.05
50. Develop instructional units revolving around job- specific concepts and skills and the needs and abilities of handicapped students.	6.03
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	6.02
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited train- ing and employment of handicapped persons.	5.98
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	5.98
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	5.98
15. Develop two-way communication during conferences with handicapped students.	5.96
38. Revise methods of performing tasks.	5.96
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	5.96
59. Develop behavior observation skills concerning handicapped students.	5.87
16. Assist handicapped students in developing good study habits related to vocational training.	5.85

TABLE 11

(Continued)

Competency and Knowledge Statement and Number	Need Index
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	5.81
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	5.79
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	5.79
56. Assist in the development of individualized education programs (IEP) for handicapped students.	5.75
64. Prepare handicapped students for leadership roles in student vocational organizations.	5.56
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	5.48
94. How to integrate and actively involve handicapped students into student vocational organizations.	5.46
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	5.33
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	5.23
7. Communicate effectively with other professionals to solve problems of the handicapped student.	5.22
4. Identify and participate in professional organizations concerned with handicapped persons.	5.18
20. Assist each handicapped student to develop and maintain a positive self-concept.	5.12

TABLE 11

(Continued)

Competency and Knowledge Statement and Number	Need Index
8. Refer students with special problems to appropriate sources.	5.09
46. Revise selection criteria to ensure program accessibility for handicapped students.	5.09
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	5.08
51. Devise flexible time limits based upon individual rates of progress.	4.89
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	4.86
62. Demonstrate a personal commitment concerning handicapped students'participation in student vocational organizations.	4.46
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	3.47
29. Interact positively and naturally with the handicapped student.	3.29

Table 12 presents the training priorities for each competency and knowledge statement for the office education teacher respondents. Forty percent of the competency and knowledge statements for the office education respondents had a need index between 6.00 and 6.96. The highest need index was 7.47 and the lowest need index was 3.44. The highest need index was for statement 83 dealing with how to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera. The lowest need index concerned competency statement 1 which concerned identifying types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons. There were 5 competency and knowledge statements with a need index of 7.02 and higher. These 5 competency statements included statement 83 previously described plus:

92. Causes for and results of low self-esteem for a handicapped individual.
89. Job requirements in occupations applicable to the handicapped.
81. Methods and procedures to identify needs and interests of handicapped students.
73. Career opportunities for the handicapped student.

Fifty percent, or 48, of the 96 competency and knowledge statements on the survey questionnaire were rated with a need index of 5.96 or higher by the responding office education teachers. Of these 48 competency and knowledge statements having a need index of 5.96 or higher, 20 were from the teacher function of Instructional Implementation, 7 were from the function of Student Guidance, and 5 were from the teacher function of Professional Role and Development. The 20 competency and knowledge statements related to Instructional Planning constituted 64.5 percent of the total competency and knowledge statements in the upper 50 percent on the survey questionnaire.

TABLE 12

Desired level of development of office education teachers priortized by need index
N = 138

Competency and Knowledge Statement and Number	Need Index
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	7.47
92. Causes for and results of low self-esteem for a handicapped individual.	7.21
89. Job requirements in occupations applicable to the handicapped.	7.18
81. Methods and procedures to identify needs and interests of handicapped students.	7.13
73. Career opportunities for the handicapped student.	7.02
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	6.96
22. Identify and provide orientation for potential employers of handicapped students.	6.95
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	6.93
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	6.92
90. Differing capabilities of handicapped students relative to the severity of their disability.	6.92
76. Physical and sensory limitations of handicapped persons.	6.84
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	6.80
87. How to recognize students with learning problems in regular class.	6.76
74. Machinery, tool and physical facility modifications for handicapped students.	6.74

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	6.73
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	6.73
79. Related services to provide the total quality aspects of a program for handicapped students.	6.70
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.70
49. Select, adapt, or develop instructional materials for use with handicapped students.	6.69
72. Knowledge of suitable job placement for handicapped students.	6.69
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	6.53
19. Assist in developing suitable job placement for handicapped students.	6.49
85. Devising flexible time limits based upon individual rates of progress.	6.49
68. Knowledge of appropriate referral source for handicapped students.	6.49
80. Appropriate expectations for the performance of handicapped persons.	6.48
78. Procedures to modify jobs.	6.45
93. Behavior observation skills for handicapped students.	6.43
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	6.39
71. Knowledge of behavior modification techniques concerning handicapped students.	6.39

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	6.36
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	6.36
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.33
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	6.28
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	6.25
88. Individualized education plan (IEP) for handicapped students.	6.24
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	6.23
34. Select cooperative training stations for individual handicapped learners.	6.22
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	6.18
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	6.15
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	6.10
59. Develop behavior observation skills concerning handicapped students.	6.10

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
44. Identify needs and interests of the handicapped student.	6.07
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	6.06
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	6.04
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	6.04
95. Leadership roles for handicapped students in vocational organizations.	6.00
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	5.97
20. Assist each handicapped student to develop and maintain a positive self-concept.	5.96
82. Learner selection of criteria to assure accessibility of handicapped students.	5.96
18. Assess the ability of the handicapped individual to modify his/her behavior.	5.91
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	5.90
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	5.88
12. Advise and counsel handicapped persons relative to personal and professional goals.	5.86
32. Modify instructional materials and equipment for individual handicapped learner's needs.	5.85

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
75. Methods and procedures to utilize resource personnel related to handicapped students.	5.85
46. Revise selection criteria to ensure program accessibility for handicapped students.	5.83
53. Develop an awareness of how to recognize students with learning problems in the regular class.	5.81
56. Assist in the development of individualized education programs (IEP) for handicapped students.	5.80
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	5.79
94. How to integrate and actively involve handicapped students into student vocational organizations.	5.77
14. Interpret occupational tests and inventories to students.	5.75
96. Role and importance of student organizations in the development of handicapped persons.	5.71
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	5.68
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	5.65
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	5.59
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	5.56

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	5.54
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	5.50
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	5.48
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	5.48
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	5.39
15. Develop two-way communication during conferences with handicapped students.	5.34
3. Use and supervise service personnel in providing vocational training for handicapped persons.	5.32
27. Apply individual instructional prescription to all handicapped pupils in class.	5.32
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	5.27
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	5.23
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	5.21
64. Prepare handicapped students for leadership roles in student vocational organizations.	5.17
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	5.14

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	5.14
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	5.10
16. Assist handicapped students in developing good study habits related to vocational training.	5.09
7. Communicate effectively with other professionals to solve problems of the handicapped student.	5.08
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	5.06
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	5.05
4. Identify and participate in professional organizations concerned with handicapped persons.	4.99
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.93
51. Devise flexible time limits based upon individual rates of progress.	4.88
38. Revise methods of performing tasks.	4.74
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	4.60
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.59
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	4.50

TABLE 12

(Continued)

Competency and Knowledge Statement and Number	Need Index
8. Refer students with special problems to appropriate sources.	4.41
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	4.25
17. Conduct a purposeful home and community visit for each handicapped student.	4.05
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	3.86
29. Interact positively and naturally with the handicapped student.	3.44

The training priorities for each competency and knowledge statement for the technical teacher respondents is presented in Table 13. There was a range between a high need index of 8.36 to a low need index of 2.83 for the vocational technical teacher respondents. Knowledge statement number 93 dealing with Federal and State laws concerning vocational education, vocational rehabilitation, and special education had a need index of 8.36. Thirty four of the competency and knowledge statements were in a range between a need index of 5.01 and 5.97. Eighteen of the competency and knowledge statements were in a range between a need index of 4.00 and a need index of 4.93. The only competency statement with a need index below 3.00 was statement number 29 which was interact positively and naturally with the handicapped student.

The technical teacher respondents rated 50 percent of the 96 competency and knowledge statements on the questionnaire with a need index of 5.59 or higher. Forty eight competency and knowledge statements constituting 50 percent rated with a need index of 5.59 or higher by the technical teacher respondents were from the following teacher functions:

Instructional Planning--22 competency and knowledge statements

Student Guidance--8 competency and knowledge statements

Instructional Implementation--5 competency and knowledge statements

Professional Role and Development--3 competency and knowledge statements

School/Community Relations--3 competency and knowledge statements

Evaluation--3 competency and knowledge statements

Program Management--2 competency and knowledge statements.

TABLE 13

Desired level of development of technical teachers priortized by need index
N = 35

Competency and Knowledge Statement and Number	Need Index
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	8.36
73. Career opportunities for the handicapped student.	7.65
90. Differing capabilities of handicapped students relative to the severity of their disability.	7.65
72. Knowledge of suitable job placement for handicapped students.	7.31
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	7.26
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	7.06
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	7.03
92. Causes for and results of low self-esteem for a handicapped individual.	7.00
81. Mehtods and procedures to identify needs and interests of handicapped tudents.	6.99
93. Behavior observation skills for handicapped students.	6.95
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.93
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	6.92
79. Related services to provide the total quality aspects of a program for handicapped students.	6.87

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
76. Physical and sensory limitations of handicapped persons.	6.80
14. Interpret occupational tests and inventories to students.	6.69
19. Assist in developing suitable job placement for handicapped students.	6.61
78. Procedures to modify jobs.	6.58
68. Knowledege of appropriate referral sources for handicapped students.	6.57
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	6.52
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	6/5-
75. Methods and procedures to utilize resource personnel related to handicapped students.	6.47
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	6.42
74. Machinery, tool, and physical facility modifications for handicapped students.	6.41
89. Job requirements in occupations applicable to the handicapped.	6.40
94. How to integrate and actively involve handicapped students into student vocational organizations.	6.36
87. How to recognize students with learning problems in regular class.	6.35
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	6.34

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	6.29
53. Develop an awareness of how to recognize students with learning problems in the regular class.	6.26
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	6.19
71. Knowledge of behavior modification techniques concerning handicapped students.	6.18
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	6.15
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	6.14
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	6.09
69. Knowledge of interpreting occupational aptitude and ability tasks and inventories to students.	5.97
82. Learner selection of criteria to assure accessibility of handicapped students.	5.97
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	5.91
44. Identify needs and interests of the handicapped student.	5.83
59. Develop behavior observation skills concerning handicapped students.	5.79
80. Appropriate expectations for the performance of handicapped persons.	5.79

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	5.78
12. Advise and counsel handicapped persons relative to personal and professional goals.	5.74
22. Identify and provide orientation for potential employers of handicapped students.	5.72
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	5.66
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	5.62
88. Individualized education plan (IEP) for handicapped students.	5.62
48. Develop instructional activities by clustering and sequencing related tasks according to individual handi- capped students' interests, abilities, and needs.	5.59
49. Select, adapt, or develop instructional materials for use with handicapped students.	5.58
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	5.54
20. Assist each handicapped student to develop and maintain a positive self-concept.	5.53
16. Assist handicapped students in developing good study habits related to vocational training.	5.48
56. Assist in the development of individualized education programs (IEP) for handicapped students.	5.48
43. Refine appropriate expectations for laboratory and cooperative work performance of handicapped persons.	5.45

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	5.41
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	5.40
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	5.36
46. Revise selection criteria to ensure program accessibility for handicapped students.	5.33
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	5.32
18. Assess the ability of the handicapped individual to modify his/her behavior.	5.28
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	5.25
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	5.21
17. Conduct a purposeful home and community visit for each handicapped student.	5.20
15. Develop two-way communication during conferences with handicapped students.	5.16
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	5.11
34. Select cooperative training stations for individual handicapped learners.	5.11
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	5.11

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	5.04
3. Use and supervise service personnel in providing vocational training for handicapped persons.	5.01
33. Develop a procedure for fulfilling an individual instruc- tional prescription in the classroom and laboratory situation.	4.93
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	4.92
85. Devising flexible time limits based upon individual rates of progress.	4.92
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	4.89
96. Role and importance of student organizations in the development of handicapped persons.	4.85
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	4.76
64. Prepare handicapped students for leadership roles in student vocational organizations.	4.67
32. Modify instructional materials and equipment for individual handicapped learner's needs.	4.66
45. Conduct parent/teacher conferences for planning instruc- tional programs.	4.61
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	4.46
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	4.46

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
38. Revise methods of performing tasks.	4.42
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	4.40
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	4.33
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.29
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	4.28
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	4.25
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.00
51. Devise flexible time limits based upon individual rates of progress.	3.91
8. Refer students with special problems to appropriate sources.	3.83
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	3.77
4. Identify and participate in professional organizations concerned with handicapped persons.	3.73
27. Apply individual instructional prescription to all handi- capped pupils in class.	3.73
7. Communicate effectively with other professionals to solve problems of the handicapped student.	3.50

TABLE 13

(Continued)

Competency and Knowledge Statement and Number	Need Index
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	3.02
29. Interact positively and naturally with the handicapped student.	2.83

The training priorities of the trade and industry teacher respondents are presented in Table 14. The highest need index was 7.73 and the lowest need index was 3.57. The 7.73 need index concerned competency statement 83 which was how to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera. The lowest need index, statement 29, was interact positively and naturally with the handicapped student. There were 52 competency and knowledge statements between a need index of 5.03 and 5.99. Eighteen of the statements had a need index below 4.99. Twenty-two of the statements had a need index range from 6.00 to 6.72.

Fifty percent, or 48, of the 96 competency and knowledge statements on the survey questionnaire had a need index of 5.56 or higher for the trade and industry teacher respondents. The trade and industry teachers were the only responding group which had all of the competency and knowledge statements from the teacher functions of Program Management and Evaluation in the upper 50th percentile. The other competency and knowledge statements in the upper 50th percentile and having a need index of 5.56 or higher included: 1) 15 statements from the teacher function of Instructional Planning; 2) 11 statements from the teacher function of Instructional Planning; 3) 11 statements from the teacher function of Student Guidance; 4) 7 statements from the teacher function of Instructional Implementation; 5) 5 from the function of School/Community Relations; and 6) 4 from the function of Professional Role and Development.

TABLE 14

Desired level of development of trade and industry teachers priortized by need index N = 169

Competency and Knowledge Statement and Number	Need Index
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	7.73
22. Identify and provide orientation for potential employers of handicapped students.	7.04
73. Career opportunities for the handicapped student.	6.72
81. Methods and procedures to identify needs and interests of handicapped students.	6.59
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	6.51
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	6.50
72. Knowledge of suitable job placement for handicapped students.	6.47
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	6.40
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	6.38
89. Job requirements in occupations applicable to the handicapped.	6.30
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	6.27
71. Knowledge of behavior modification techniques concerning handicapped students.	6.26
19. Assist in developing suitable job placement for handicapped students.	6.21

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
92. Causes for and results of low self-esteem for a handicapped individual.	6.21
12. Advise and counsel handicapped persons relative to personal and professional goals.	6.15
87. How to recognize students with learning problems in regular class.	6.15
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	6.13
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.13
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and cognitive abilities of the student to plan progress.	6.11
68. Knowledge of appropriate referral sources for handicapped students.	6.09
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	6.03
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	6.02
75. Methods and procedures to utilize resource personnel related to handicapped students.	6.01
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation and mental health department.	6.00
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	5.99

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
90. Differing capabilities of handicapped students relative to the severity of their disability.	5.99
54. Use diagnostic and prescriptive assessment techniques for planning instruction.	5.96
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	5.96
93. Behavior observation skills for handicapped students.	5.96
82. Learner selection of criteria to assure accessibility of handicapped students.	5.95
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	5.92
20. Assist each handicapped student to develop and maintain a positive self-concept.	5.92
76. Physical and sensory limitations of handicapped persons.	5.92
18. Assess the ability of the handicapped individual to modify his/her behavior.	5.85
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	5.80
74. Machinery, tool, and physical facility modifications for handicapped students.	5.80
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	5.80
17. Conduct a purposeful home and community visit for each handicapped student.	5.78
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	5.77

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	5.76
53. Develop an awareness of how to recognize students with learning problems in the regular class.	5.74
79. Related services to provide the total quality aspects of a program for handicapped students.	5.74
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	5.70
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	5.69
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	5.66
3. Use and supervise service personnel in providing vocational training for handicapped persons.	5.61
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	5.57
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	5.56
59. Develop behavior observation skills concerning handicapped students.	5.55
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	5.52
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	5.49

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
49. Select, adapt, or develop instructional materials for use with handicapped students.	5.49
56. Assist in the development of individualized education programs (IEP) for handicapped students.	5.49
14. Interpret occupational tests and inventories to students.	5.45
80. Appropriate expectations for the performance of handicapped persons.	5.44
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	5.42
78. Procedures to modify jobs.	5.41
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	5.32
34. Select cooperative training stations for individual handicapped learners.	5.30
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	5.30
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	5.29
16. Assist handicapped students in developing good study habits related to vocational training.	5.28
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	5.28
95. Leadership roles for handicapped students in vocational organizations.	5.27
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	5.22

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
94. How to integrate and actively involve handicapped students into student vocational organizations.	5.19
46. Revise selection criteria to ensure program accessibility for handicapped students.	5.18
7. Communicate effectively with other professionals to solve problems of the handicapped student.	5.14
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	5.10
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	5.09
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	5.07
4. Identify and participate in professional organizations concerned with handicapped persons.	5.07
44. Identify needs and interests of the handicapped student.	5.07
88. Individualized education plan (IEP) for handicapped students.	5.05
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	5.04
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	5.03
15. Develop two-way communication during conferences with handicapped students.	4.99
45. Conduct parent/teacher conferences for planning instructional programs.	4.98
85. Devising flexible time limits based upon individual rates of progress.	4.96

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	4.94
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	4.86
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	4.83
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.81
28. Use the basic principles of learning modification related to vocational instruction for the handicapped.	4.72
96. Role and importance of student organizations in the development of handicapped persons.	4.71
32. Modify instructional materials and equipment for individual handicapped learner's needs.	4.65
8. Refer students with special problems to appropriate sources.	4.58
27. Apply individual instructional prescription to all handicapped pupils in class.	4.40
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	4.38
51. Devise flexible time limits based upon individual rates of progress.	4.20
38. Revise methods of performing tasks.	4.19
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.15
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	4.15

TABLE 14

(Continued)

Competency and Knowledge Statement and Number	Need Index
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	3.93
29. Interact positively and naturally with the handicapped student.	3.57

The training priorities for each competency and knowledge statement for responding vocational teacher educators for all seven program areas are presented in Table 15. The highest need index for Table 15 was 7.32 and the lowest need index was 3.92. The 7.32 need index was for competency statement 22 which was identify and provide orientation for potential employers of handicapped students. The lowest need index was for competency statement 4--identify and participate in professional organizations concerned with handicapped persons. Three of the competency and knowledge statements had a need index of 7.01 and higher. These statements included statement 22 previously described plus:

9. Assist handicapped students in developing social, physical, and emotional security for future employment.

73. Career opportunities for the handicapped student.

Thirty-one of the statements ranged from a need index of 6.01 to a need index of 6.90. Twelve of the statements had a need index below 4.98.

There were 48, or 50 percent, of the competency and knowledge statements of all the responding vocational teacher educators which had a need index of 5.80 or higher. As with the vocational teacher respondents, the teacher educators also had a great number of competency and knowledge statements from the teacher function of Instructional Planning in the upper 50th percentile. Included in the competency and knowledge statements with a need index of 5.80 and higher for the vocational teacher educator respondents were: 1) 21 statements from the teacher function of Instructional Planning; 2) 9 statements from the function of Instructional Implementation; and 3) 6 competency and knowledge statements from the teacher function of Student Guidance.

TABLE 15

Desired level of development of vocational teacher educators for all seven vocational program areas priortized by need index

Competency and Knowledge Statement and Number	Need Index
22. Identify and provide orientation for potential employers of handicapped students.	7.32
9. Assist handicapped students in developing social, physical, and emotional security for future employment.	7.16
73. Career opportunities for the handicapped student.	7.01
42. Assist in a long range plan for integrating the handicapped student into the vocational educational program.	6.90
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	6.89
19. Assist in developing suitable job placement for handicapped student.	6.79
87. How to recognize students with learning problems in regular class.	6.76
47. Develop an integrated program for each handicapped student in cooperation with special education teachers.	6.75
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	6.72
13. Counsel parents/guardians of handicapped students regarding their child's vocational education/career plans.	6.68
89. Job requirements in occupations applicable to the handicapped.	6.65
83. How to interpret reports of other rofessional such as psychological evaluations, etc.	6.64
93. Behavior observation skills for handicapped students.	6.63

TABLE 15

(Continued)

Competency and Knowledge Statement and Number	Need Index
68. Knowledge of appropriate referral sources for handicapped students.	6.58
90. Differing capabilities of handicapped students relative to the severity of their disability.	6.57
49. Select, adapt, or develop instructional materials for use with handicapped students.	6.53
72. Knowledge of suitable job plkacement for handicapped students.	6.43
81. Methods and procedures to identify needs and interests of handicapped students.	6.42
74. Machinery, tool and physical facility modifications for handicapped students.	6.41
80. Appropriate expectations for the performance of handicapped persons.	6.32
20. Assist each handicapped student to develop and maintain a positive self-concept.	6.27
92. Causes for and results of low self-esteem for a handicapped individual.	6.25
59. Develop behavior observation skills concerning handicapped students.	6.25
32. Modify instructional materials and equipment for individual handicapped leqarner's needs.	6.24
23. Cooperate with appropriate agencies/groups in identifying career opportunities for handicapped students.	6.24
88. Individualized education plan (IEP) for handicapped students.	6.19
54. Use diagnostic/descriptive assessment techniques for planning instruction.	6.14
41. Modify/adapt when necessary the tools, equipment/ facilities/conditions in the learning environment.	6.14

TABLE 15

(Continued)

Competency and Knowledge Statement and Number	Need Index
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	6.11
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	6.05
53. Develop an awareness of how to recognize students with learning problems in the regular class.	6.03
82. Learner selection of criteria to assure accessibility of handicapped students.	6.02
27. Apply individual instructional prescriptions to all handicapped pupils in class.	6.01
18. Assess the ability of the handicapped individual to modify his/her behavior.	6.01
56. Assist in the development of individualized education programs (IEP) for handicapped students.	5.99
79. Related services to provide the total quality aspects of a program for handicapped students.	5.98
35. Translate statements describing physical/sensory limitations into statements concerning instructional limitations.	5.98
78. Procedures to modify jobs.	5.95
95. Leadership roles for handicapped students in vocational organizations.	5.94
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	5.91
21. Assist parents and other teachers in interpreting vocational programs/services for handicapped students.	5.90
37. Provide teaching strategies/delivery systems based upon individual learning styles/abilities of students.	5.89

TABLE 15

(Continued)

Competency and Knowledge Statement and Number	Need Index
45. Conduct parent/teacher conferences for planning instructional programs.	5.86
48. Develop instructional activities by clustering/ sequencing related tasks according to student's needs.	5.83
94. How to integrate and actively involve handicapped students into student vocational organizations.	5.83
77. Procedure to sequence tasks to conform with learning styles, etc., of handicapped students.	5.82
84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.	5.82
76. Physical and sensory limitations of handicapped persons.	5.80
25. Utilize a variety of teaching methods and techniques to provide instruction for handicapped students.	5.79
57. Evaluate a student's performance according to the objectives on the individualized education plan (IEP).	5.76
55. Identify the services needed to increase handicapped students' chances in regular programs.	5.71
34. Select cooperative training stations for individual handicapped learners.	5.64
96. Role and importance of student organizations in the development of handicapped persons.	5.63
12. Advise and counsel handicapped person relative to personal and professional goals.	5.59
60. Obtain follow-up information on handicapped students learning or graduating from school programs.	5.57

TABLE 15

(Continued)

Competency and Knowledge Statement and Number	Need Index
71. Knowledge of behavior modification techniques concerning handicapped students.	5.55
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential.	5.54
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, etc.	5.53
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	5.48
43. Define appropriate expectations for laboratory/cooperative work performance of handicapped student.	5.47
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational organizations.	5.47
46. Revise selection criteria to ensure program accessibility for handicapped students.	5.46
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	5.45
50. Develop instructional units revolving around job-specific concepts and skills and needs/ abilities of handicapped.	5.39
63. Integrate/actively involve handicapped students in an on-going student vocational organization.	5.39
8. Refer students with special problems to appropriate sources.	5.37
15. Develop two way communication during conferences with handicapped students.	5.35
85. Devising flexible time limits based upon individual rates of progress.	5.33

TABLE 15

(Continued)

Competency and Knowledge Statement and Number	Need Index
14. Interpret occupational tests and inventories to students.	5.25
16. Assist handicapped students in developing good study habits related to vocational training.	5.23
39. Develop appropriate attitudes of non-handicapped students toward handicapped students.	5.21
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	5.16
7. Communicate effectively with other professionals to solve problems of the handicapped student.	5.15
66. Knowledge of barriers that have inhibited training and employment of handicapped persons.	5.12
75. Methods/procedures to utilize resource personnel related to handicapped students.	5.09
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	5.09
38. Revise methods of performing tasks.	5.09
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	5.07
3. Use and supervise service personnel in providing vocational training for handicapped persons.	5.05
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom/ laboratory.	5.04
51. Devise flexible time limits based upon individual rates of progress.	5.00
5. Maintain ethical and legal standards appropriate for working with handicapped students.	4.98

TABLE 15

(Continued)

Competency and Knowledge Statement and Number	Need Index
61. Conduct a comprehensive evaluation of the total vocational program for needs of handicapped students.	4.97
91. Federal and state laws concerning vocational education, vocational rehabilitation, and special education.	4.96
44. Identify needs and interests of the handicapped student.	4.96
1. Identify types of barriers that have inhibited training and employment of handicapped persons.	4.88
28. Use the basic principles of learning theory behavior modification related to vocational instruction (handicapped).	4.83
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	4.82
52. Utilize information obtained from related disciplines about the sensory, etc., abilities of students to progress.	4.77
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	4.77
17. Conduct a purposeful home and community visit for each handicapped student.	4.66
62. Demonstrate personal commitment concerning handicapped students' participation in vocational organizations.	4.57
29. Interact positively and naturally with the handicapped student.	4.42
4. Identify and participate in professional organizations concerned with handicapped persons.	3.92

Table 16 presents a comparison of training needs for each vocational program area by need index for each of the 96 competency and knowledge statements. A graphic illustration is presented within the table which shows the range between the actual (A) or present level of development and the desired (D) level of development. The need index as well as the total number of responses (N) is given per competency and knowledge statement.

The comparison of ranges can easily be seen as illustrated with competency statement number 1. For all groups the need index is 4.94 with a range from 4.09 to 5.98. Further by comparing present and desired competency levels, a comparison can be easily seen for agriculture teachers ranging between 2.9 and 3.8 while office education teachers range between 2.9 and 3.9. There is 1 little practical difference in the desired levels of improvement based on the need index of each competency and knowledge statement among the respondents of all seven vocational instructional program areas for all of the 96 statements.

As shown in Table 16 the N for each statement changes. This change of N is due to nonresponses not being counted for the statement. This table shows the commonality of training needs for each vocational education program area for every statement. The commonality of need will be of value in determining if separate instruction is needed for each program area, or if instruction for development of the competency or knowledge could be provided across all program areas.

TABLE 16

A comparison of training needs for vocational teachers for all program areas

1. Identify types of barriers that have inhibited training and employment of handicapped persons.

	1 2 3 4 5	NEED INDEX	N[3]
ACROSS ALL GROUPS	A[1]**********D[2]	4.94	597
Agri. Teachers	A**********D	4.09	43
Office Teachers	A**********D	4.60	127
Distr. Teachers	A***********D	4.76	50
Health Teachers	A**********D	4.38	61
H/Econ. Teachers	A************D	5.98	130
T/I Teachers	A***********D	5.04	153
Tech. Teachers	A**********D	4.28	33

2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A***********D	5.12	593
Agri. Teachers	A**********D	4.02	44
Office Teachers	A**********D	4.50	127
Distr. Teachers	A************D	6.00	49
Health Teachers	A***********D	4.90	61
H/Econ. Teachers	A*************D	6.32	128
T/I Teachers	A***********D	5.07	151
Tech. Teachers	A**********D	3.77	33

3. Use and supervise service personnel in providing vocational training for handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A************D	5.70	589
Agri. Teachers	A***********D	4.24	44
Office Teachers	A************D	5.32	126
Distr. Teachers	A************D	5.64	49
Health Teachers	A*************D	6.09	60
H/Econ. Teachers	A*************D	6.80	127
T/I Teachers	A************D	5.61	150
Tech. Teachers	A***********D	5.01	33

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1 A Actual (present) level of competency or knowledge development.
2 D Desired level of competency or knowledge development.
3 N Missing responses have been omitted; therefore the N will vary per statement.

TABLE 16

(Continued)

4. Identify and participate in professional organizations concerned with handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.94	599
Agri. Teachers	A**********D	4.02	44
Office Teachers	A**********D	4.99	128
Distr. Teachers	A**********D	4.45	50
Health Teachers	A**********D	5.84	61
H/Econ. Teachers	A**********D	5.18	129
T/I Teachers	A**********D	5.07	155
Tech. Teachers	A**********D	3.73	32

5. Maintain ethical and legal standards appropriate for working with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.96	593
Agri. Teachers	A**********D	4.49	44
Office Teachers	A**********D	4.93	127
Distr. Teachers	A**********D	5.34	50
Health Teachers	A*********D	4.28	58
H/Econ. Teachers	A**********D	5.67	129
T/I Teachers	A**********D	4.81	153
Tech. Teachers	A**********D	4.29	32

6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.99	595
Agri. Teachers	A**********D	4.94	44
Office Teachers	A**********D	6.06	127
Distr. Teachers	A**********D	6.83	49
Health Teachers	A**********D	5.94	61
H/Econ. Teachers	A**********D	6.56	129
T/I Teachers	A**********D	5.49	153
Tech. Teachers	A**********D	6.14	32

TABLE 16

(Continued)

7. Communicate effectively with other professionals to solve problems of the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.07	594
Agri. Teachers	A**********D	4.97	44
Office Teachers	A**********D	5.08	127
Distr. Teachers	A**********D	5.30	50
Health Teachers	A**********D	5.36	61
H/Econ. Teachers	A**********D	5.22	127
T/I Teachers	A**********D	5.14	152
Tech. Teachers	A********D	3.50	33

8. Refer students with special problems to appropriate sources.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.70	593
Agri. Teachers	A**********D	4.16	43
Office Teachers	A**********D	4.41	128
Distr. Teachers	A**********D	5.34	50
Health Teachers	A**********D	5.13	60
H/Econ. Teachers	A**********D	5.09	128
T/I Teachers	A**********D	4.58	152
Tech. Teachers	A*********D	3.83	32

9. Assist handicapped students in developing social, physical, and emotional security for future employment.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A***********D	6.38	596
Agri. Teachers	A***********D	6.13	43
Office Teachers	A***********D	6.80	127
Distr. Teachers	A***********D	6.59	49
Health Teachers	A***********D	5.94	61
H/Econ. Teachers	A***********D	7.18	128
T/I Teachers	A***********D	5.80	155
Tech. Teachers	A**********D	5.25	33

TABLE 16

(Continued)

10. Assist the handicapped student in viewing his/her assets and limitations realistically.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.43	592
Agri. Teachers	A**********D	5.87	43
Office Teachers	A**********D	6.39	124
Distr. Teachers	A**********D	7.31	50
Health Teachers	A**********D	6.49	61
H/Econ. Teachers	A**********D	7.14	128
T/I Teachers	A**********D	5.92	153
Tech. Teachers	A**********D	5.54	33

11. Assist in identifying school vocational education purposes and goals for the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.56	593
Agri. Teachers	A**********D	5.93	43
Office Teachers	A**********D	5.27	125
Distr. Teachers	A**********D	6.56	50
Health Teachers	A**********D	6.35	60
H/Econ. Teachers	A**********D	5.66	129
T/I Teachers	A**********D	5.09	153
Tech. Teachers	A**********D	5.04	33

12. Advise and counsel handicapped person relative to personal and professional goals.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.02	595
Agri. Teachers	A**********D	6.18	43
Office Teachers	A**********D	5.86	125
Distr. Teachers	A**********D	5.25	50
Health Teachers	A**********D	5.68	61
H/Econ. Teachers	A**********D	6.52	129
T/I Teachers	A**********D	6.15	154
Tech. Teachers	A**********D	5.74	33

TABLE 16

(Continued)

13. Counsel parents/guardians of handicapped students regarding their child's vocational education/career plans.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.41	592
Agri. Teachers	A**********D	6.99	43
Office Teachers	A**********D	5.90	124
Distr. Teachers	A**********D	5.81	50
Health Teachers	A**********D	6.83	61
H/Econ. Teachers	A**********D	7.10	128
T/I Teachers	A**********D	6.02	153
Tech. Teachers	A**********D	6.92	33

14. Interpret occupational tests and inventories to students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.23	595
Agri. Teachers	A**********D	5.31	43
Office Teachers	A**********D	5.75	125
Distr. Teachers	A**********D	6.21	50
Health Teachers	A**********D	7.45	61
H/Econ. Teachers	A**********D	7.25	131
T/I Teachers	A**********D	5.45	152
Tech. Teachers	A**********D	6.69	33

15. Develop two way communication during conferences with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.53	589
Agri. Teachers	A**********D	5.94	43
Office Teachers	A**********D	5.34	123
Distr. Teachers	A**********D	5.72	49
Health Teachers	A**********D	6.10	61
H/Econ. Teachers	A**********D	5.96	129
T/I Teachers	A**********D	4.99	151
Tech. Teachers	A**********D	5.16	33

TABLE 16

(Continued)

16. Assist handicapped students in developing good study habits related to vocational training.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.62	591
Agri. Teachers	A**********D	5.12	43
Office Teachers	A**********D	5.09	124
Distr. Teachers	A***********D	6.46	50
Health Teachers	A***********D	6.84	61
H/Econ. Teachers	A***********D	5.85	128
T/I Teachers	A**********D	5.28	152
Tech. Teachers	A**********D	5.48	33

17. Conduct a purposeful home and community visit for each handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.27	594
Agri. Teachers	A**********D	5.02	43
Office Teachers	A**********D	4.05	124
Distr. Teachers	A**********D	5.43	50
Health Teachers	A**********D	6.27	61
H/Econ. Teachers	A**********D	5.48	131
T/I Teachers	A**********D	5.78	152
Tech. Teachers	A**********D	5.20	33

18. Assess the ability of the handicapped individual to modify his/her behavior.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.37	590
Agri. Teachers	A**********D	5.23	42
Office Teachers	A**********D	5.91	125
Distr. Teachers	A***********D	7.24	50
Health Teachers	A**********D	6.49	60
H/Econ. Teachers	A***********D	7.78	126
T/I Teachers	A**********D	5.85	154
Tech. Teachers	A**********D	5.28	33

TABLE 16

(Continued)

19. Assist in developing suitable job placement for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.47	595
Agri. Teachers	A**********D	5.60	43
Office Teachers	A**********D	6.49	125
Distr. Teachers	A**********D	5.73	50
Health Teachers	A**********D	7.92	60
H/Econ. Teachers	A**********D	6.92	129
T/I Teachers	A**********D	6.21	155
Tech. Teachers	A**********D	5.61	33

20. Assist each handicapped student to develop and maintain a positive self-concept.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.86	590
Agri. Teachers	A**********D	5.97	43
Office Teachers	A**********D	5.96	124
Distr. Teachers	A**********D	7.25	49
Health Teachers	A**********D	6.01	59
H/Econ. Teachers	A**********D	5.12	130
T/I Teachers	A**********D	5.92	152
Tech. Teachers	A**********D	5.53	33

21. Assist parents and other teachers in interpreting vocational programs/services for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.18	595
Agri. Teachers	A**********D	5.58	43
Office Teachers	A**********D	5.65	124
Distr. Teachers	A**********D	6.87	50
Health Teachers	A**********D	7.00	60
H/Econ. Teachers	A**********D	6.70	132
T/I Teachers	A**********D	5.99	153
Tech. Teachers	A**********D	5.36	33

TABLE 16

(Continued)

22. Identify and provide orientation for potential employers of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	7.11	595
Agri. Teachers	A**********D	6.17	43
Office Teachers	A**********D	6.95	125
Distr. Teachers	A**********D	6.95	50
Health Teachers	A**********D	8.22	60
H/Econ. Teachers	A**********D	7.57	131
T/I Teachers	A**********D	7.04	154
Tech. Teachers	A**********D	5.72	32

23. Cooperate with appropriate agencies/groups in identifying career opportunities for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.17	590
Agri. Teachers	A**********D	5.14	43
Office Teachers	A**********D	6.25	123
Distr. Teachers	A**********D	6.25	50
Health Teachers	A**********D	7.35	59
H/Econ. Teachers	A**********D	6.59	130
T/I Teachers	A**********D	5.77	153
Tech. Teachers	A**********D	5.32	32

24. Influence attitudes of regular school personnel/students toward accepting handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.01	591
Agri. Teachers	A**********D	5.57	43
Office Teachers	A**********D	5.79	125
Distr. Teachers	A**********D	6.27	49
Health Teachers	A**********D	7.00	60
H/Econ. Teachers	A**********D	6.22	129
T/I Teachers	A**********D	5.70	152
Tech. Teachers	A**********D	5.78	33

TABLE 16

(Continued)

25. Utilize a variety of teaching methods and techniques to provide instruction for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.26	592
Agri. Teachers	A**********D	5.36	43
Office Teachers	A**********D	6.36	124
Distr. Teachers	A**********D	7.67	50
Health Teachers	A**********D	7.00	60
H/Econ. Teachers	A**********D	6.26	131
T/I Teachers	A**********D	5.69	151
Tech. Teachers	A**********D	6.09	33

26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.29	593
Agri. Teachers	A**********D	4.38	44
Office Teachers	A**********D	3.86	127
Distr. Teachers	A**********D	4.80	50
Health Teachers	A**********D	4.67	59
H/Econ. Teachers	A**********D	5.08	131
T/I Teachers	A**********D	3.93	149
Tech. Teachers	A********D	3.02	33

27. Apply individual instructional prescriptions to all handicapped pupils in class.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.36	592
Agri. Teachers	A**********D	5.42	44
Office Teachers	A**********D	5.32	126
Distr. Teachers	A**********D	6.06	50
Health Teachers	A**********D	6.22	59
H/Econ. Teachers	A**********D	6.27	130
T/I Teachers	A**********D	4.40	150
Tech. Teachers	A*********D	3.73	33

TABLE 16

(Continued)

28. Use the basic principles of learning theory/behavior modification related to vocational instruction (handicapped).

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.21	592
Agri. Teachers	A**********D	4.09	44
Office Teachers	A**********D	5.06	126
Distr. Teachers	A**********D	6.06	50
Health Teachers	A**********D	6.22	59
H/Econ. Teachers	A**********D	5.79	129
T/I Teachers	A**********D	4.72	151
Tech. Teachers	A**********D	4.33	33

29. Interact positively and naturally with the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A********D	3.61	594
Agri. Teachers	A********D	3.63	44
Office Teachers	A********D	3.44	127
Distr. Teachers	A**********D	4.69	50
Health Teachers	A*********D	4.23	59
H/Econ. Teachers	A*******D	3.29	130
T/I Teachers	A********D	3.57	151
Tech. Teachers	A******D	2.83	33

30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.30	590
Agri. Teachers	A**********D	4.61	44
Office Teachers	A**********D	4.59	126
Distr. Teachers	A**********D	5.25	50
Health Teachers	A**********D	4.98	59
H/Econ. Teachers	A*******D	3.47	128
T/I Teachers	A**********D	4.15	150
Tech. Teachers	A*********D	4.00	33

TABLE 16

(Continued)

31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.93	590
Agri. Teachers	A**********D	5.56	44
Office Teachers	A**********D	5.59	124
Distr. Teachers	A**********D	5.12	50
Health Teachers	A**********D	7.80	59
H/Econ. Teachers	A**********D	6.54	130
T/I Teachers	A**********D	5.57	150
Tech. Teachers	A**********D	5.11	33

32. Modify instructional materials and equipment for individual handicapped learner's needs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.67	595
Agri. Teachers	A**********D	5.15	44
Office Teachers	A**********D	5.85	127
Distr. Teachers	A**********D	7.20	50
Health Teachers	A**********D	6.85	58
H/Econ. Teachers	A**********D	6.05	130
T/I Teachers	A**********D	4.65	153
Tech. Teachers	A**********D	4.66	33

33. Develop a procedure for fulfilling an individual instructional prescription the classroom/laboratory.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.92	592
Agri. Teachers	A**********D	4.44	43
Office Teachers	A**********D	5.68	126
Distr. Teachers	A**********D	6.77	50
Health Teachers	A**********D	6.70	59
H/Econ. Teachers	A**********D	6.98	130
T/I Teachers	A**********D	5.32	151
Tech. Teachers	A**********D	4.93	33

TABLE 16

(Continued)

34. Select cooperative training stations for individual handicapped learners.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.87	585
Agri. Teachers	A**********D	4.94	43
Office Teachers	A**********D	6.22	124
Distr. Teachers	A**********D	5.33	50
Health Teachers	A**********D	7.50	58
H/Econ. Teachers	A**********D	6.22	129
T/I Teachers	A**********D	5.30	150
Tech. Teachers	A**********D	5.11	31

35. Translate statements describing physical/sensory limitations into statements concerning instructional limitations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.37	591
Agri. Teachers	A**********D	5.05	43
Office Teachers	A**********D	6.23	126
Distr. Teachers	A**********D	6.55	50
Health Teachers	A**********D	7.50	60
H/Econ. Teachers	A**********D	6.76	131
T/I Teachers	A**********D	6.27	148
Tech. Teachers	A**********D	5.40	33

36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.00	594
Agri. Teachers	A**********D	5.69	44
Office Teachers	A**********D	5.97	126
Distr. Teachers	A**********D	6.04	50
Health Teachers	A**********D	6.77	60
H/Econ. Teachers	A**********D	6.95	131
T/I Teachers	A**********D	5.22	150
Tech. Teachers	A**********D	4.92	33

TABLE 16

(Continued)

37. Provide teaching strategies/delivery systems based upon individual learning styles/abilities of students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.94	593
Agri. Teachers	A**********D	4.99	43
Office Teachers	A**********D	6.04	127
Distr. Teachers	A**********D	7.34	50
Health Teachers	A**********D	6.87	60
H/Econ. Teachers	A**********D	6.29	131
T/I Teachers	A**********D	5.10	149
Tech. Teachers	A**********D	5.41	33

38. Revise methods of performing tasks.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.14	594
Agri. Teachers	A**********D	4.43	43
Office Teachers	A**********D	4.74	126
Distr. Teachers	A**********D	6.66	50
Health Teachers	A**********D	6.38	60
H/Econ. Teachers	A**********D	5.96	131
T/I Teachers	A**********D	4.19	151
Tech. Teachers	A**********D	4.42	33

39. Develop appropriate attitudes of non-handicapped students toward handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.45	588
Agri. Teachers	A**********D	4.55	41
Office Teachers	A**********D	5.39	125
Distr. Teachers	A**********D	5.72	49
Health Teachers	A**********D	6.24	59
H/Econ. Teachers	A**********D	5.81	130
T/I Teachers	A**********D	5.28	151
Tech. Teachers	A**********D	4.46	33

TABLE 16

(Continued)

40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.15	595
Agri. Teachers	A**********D	5.09	44
Office Teachers	A**********D	5.50	127
Distr. Teachers	A**********D	6.07	50
Health Teachers	A**********D	7.29	59
H/Econ. Teachers	A**********D	6.88	132
T/I Teachers	A**********D	6.13	151
Tech. Teachers	A**********D	5.62	32

41. Modify/adapt when necessary the tools, equipment/facilities/ conditions in the learning environment.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.89	591-
Agri. Teachers	A**********D	5.10	44
Office Teachers	A**********D	6.04	126
Distr. Teachers	A**********D	6.26	50
Health Teachers	A**********D	6.70	59
H/Econ. Teachers	A**********D	6.02	131
T/I Teachers	A**********D	5.66	148
Tech. Teachers	A**********D	4.89	33

42. Assist in a long range plan for integrating the handicapped student into the vocational educational program.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.04	594
Agri. Teachers	A**********D	4.54	44
Office Teachers	A**********D	6.73	126
Distr. Teachers	A**********D	6.63	49
Health Teachers	A**********D	7.03	60
H/Econ. Teachers	A**********D	6.30	132
T/I Teachers	A**********D	5.30	150
Tech. Teachers	A**********D	5.21	33

TABLE 16

(Continued)

43. Define appropriate expectations for laboratory/cooperative work performance of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.76	585
Agri. Teachers	A**********D	4.48	44
Office Teachers	A**********D	6.53	124
Distr. Teachers	A**********D	7.00	49
Health Teachers	A**********D	6.67	59
H/Econ. Teachers	A**********D	5.57	131
T/I Teachers	A**********D	4.94	145
Tech. Teachers	A**********D	5.45	33

44. Identify needs and interests of the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.65	588
Agri. Teachers	A**********D	5.09	44
Office Teachers	A**********D	6.07	126
Distr. Teachers	A**********D	6.86	48
Health Teachers	A**********D	5.80	58
H/Econ. Teachers	A**********D	5.49	131
T/I Teachers	A**********D	5.07	148
Tech. Teachers	A**********D	5.83	33

45. Conduct parent/teacher conferences for planning instructional programs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.42	587
Agri. Teachers	A**********D	5.01	44
Office Teachers	A**********D	5.44	124
Distr. Teachers	A**********D	5.55	49
Health Teachers	A**********D	6.86	58
H/Econ. Teachers	A**********D	5.58	131
T/I Teachers	A**********D	4.98	148
Tech. Teachers	A**********D	4.61	33

TABLE 16

(Continued)

46. Revise selection criteria to ensure program accessibility for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.51	586
Agri. Teachers	A**********D	3.91	44
Office Teachers	A**********D	5.83	121
Distr. Teachers	A**********D	6.46	49
Health Teachers	A**********D	7.29	59
H/Econ. Teachers	A**********D	5.09	132
T/I Teachers	A**********D	5.18	149
Tech. Teachers	A**********D	5.33	32

47. Develop an integrated program for each handicapped student in cooperation with special education teachers.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.59	583
Agri. Teachers	A**********D	4.01	44
Office Teachers	A**********D	5.48	124
Distr. Teachers	A**********D	6.20	48
Health Teachers	A**********D	7.81	59
H/Econ. Teachers	A**********D	5.23	129
T/I Teachers	A**********D	5.29	148
Tech. Teachers	A**********D	6.19	31

48. Develop instructional activities by clustering/sequencing related tasks according to student's needs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.71	586
Agri. Teachers	A**********D	4.54	44
Office Teachers	A**********D	5.56	125
Distr. Teachers	A**********D	6.78	49
Health Teachers	A**********D	7.04	58
H/Econ. Teachers	A**********D	5.48	130
T/I Teachers	A**********D	5.56	148
Tech. Teachers	A**********D	5.59	32

TABLE 16

(Continued)

49. Select, adapt, or develop instructional materials for use with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.04	587
Agri. Teachers	A**********D	4.56	44
Office Teachers	A**********D	6.69	125
Distr. Teachers	A**********D	7.29	49
Health Teachers	A**********D	7.02	59
H/Econ. Teachers	A**********D	5.73	130
T/I Teachers	A**********D	5.49	147
Tech. Teachers	A**********D	5.58	33

50. Develop instructional units revolving around job-specific concepts and skills and needs/abilities of handicapped.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.90	587
Agri. Teachers	A**********D	4.63	44
Office Teachers	A**********D	5.85	125
Distr. Teachers	A**********D	6.96	49
Health Teachers	A**********D	7.05	59
H/Econ. Teachers	A**********D	6.03	130
T/I Teachers	A**********D	5.42	148
Tech. Teachers	A**********D	5.88	32

51. Devise flexible time limits based upon individual rates of progress.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.85	584
Agri. Teachers	A**********D	4.21	44
Office Teachers	A**********D	4.88	124
Distr. Teachers	A**********D	6.06	49
Health Teachers	A**********D	6.39	59
H/Econ. Teachers	A**********D	4.89	130
T/I Teachers	A**********D	4.20	145
Tech. Teachers	A**********D	3.91	33

TABLE 16

(Continued)

52. Utilize information obtained from related disciplines about the sensory, etc., abilities of students to progress.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.12	590
Agri. Teachers	A*********D	4.82	44
Office Teachers	A**********D	6.10	124
Distr. Teachers	A***********D	7.16	50
Health Teachers	A**********D	6.58	60
H/Econ. Teachers	A*********D	5.88	131
T/I Teachers	A*********D	6.11	148
Tech. Teachers	A**********D	6.50	33

53. Develop an awareness of how to recognize students with learning problems in the regular class.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A*********D	6.22	590
Agri. Teachers	A********D	4.55	43
Office Teachers	A*********D	5.81	124
Distr. Teachers	A***********D	8.46	50
Health Teachers	A**********D	7.47	60
H/Econ. Teachers	A*********D	6.33	131
T/I Teachers	A*********D	5.74	149
Tech. Teachers	A**********D	6.26	33

54. Use diagnostic/descriptive assessment techniques for planning instruction.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.49	588
Agri. Teachers	A********D	4.48	42
Office Teachers	A**********D	6.92	125
Distr. Teachers	A***********D	7.06	50
Health Teachers	A***********D	7.71	59
H/Econ. Teachers	A**********D	6.62	131
T/I Teachers	A**********D	5.96	149
Tech. Teachers	A**********D	6.52	32

TABLE 16

(Continued)

55. Identify the services needed to increase handicapped students' chances in regular programs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.39	590
Agri. Teachers	A**********D	5.43	43
Office Teachers	A**********D	6.73	125
Distr. Teachers	A**********D	7.09	50
Health Teachers	A**********D	7.21	60
H/Econ. Teachers	A**********D	6.68	131
T/I Teachers	A**********D	5.76	148
Tech. Teachers	A**********D	5.66	33

56. Assist in the development of individualized education programs (IEP) for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.80	586
Agri. Teachers	A**********D	4.56	43
Office Teachers	A**********D	5.80	125
Distr. Teachers	A**********D	6.54	50
Health Teachers	A**********D	7.01	59
H/Econ. Teachers	A**********D	5.75	131
T/I Teachers	A**********D	5.49	147
Tech. Teachers	A**********D	5.48	31

57. Evaluate a student's performance according to the objectives on the individualized education plan (IEP).

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.21	584
Agri. Teachers	A**********D	3.70	43
Office Teachers	A**********D	5.10	123
Distr. Teachers	A**********D	6.64	50
Health Teachers	A**********D	6.44	58
H/Econ. Teachers	A**********D	5.96	131
T/I Teachers	A**********D	4.15	147
Tech. Teachers	A**********D	5.11	32

TABLE 16

(Continued)

58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.08	588
Agri. Teachers	A**********D	5.00	43
Office Teachers	A***********D	6.18	125
Distr. Teachers	A************D	7.25	50
Health Teachers	A************D	7.42	60
H/Econ. Teachers	A***********D	6.58	131
T/I Teachers	A*********D	4.86	147
Tech. Teachers	A***********D	6.42	32

59. Develop behavior observation skills concerning handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.86	584
Agri. Teachers	A**********D	4.66	43
Office Teachers	A***********D	6.10	123
Distr. Teachers	A***********D	6.64	50
Health Teachers	A***********D	6.30	60
H/Econ. Teachers	A**********D	5.87	130
T/I Teachers	A**********D	5.55	146
Tech. Teachers	A**********D	5.79	32

60. Obtain follow-up information on handicapped students learning or graduating from school programs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.86	589
Agri. Teachers	A*********D	4.15	43
Office Teachers	A**********D	5.48	124
Distr. Teachers	A***********D	6.34	50
Health Teachers	A************D	6.80	59
H/Econ. Teachers	A**********D	5.69	131
T/I Teachers	A***********D	6.03	149
Tech. Teachers	A************D	7.26	33

TABLE 16

(Continued)

64. Prepare handicapped students for leadership roles in student vocational organizations.

	1 2 3 4 5	NEED INDEX	N
	+.....+.....+.....+.....+		
ACROSS ALL GROUPS	A**********D	5.17	591
Agri. Teachers	A********D	3.62	44
Office Teachers	A**********D	5.17	124
Distr. Teachers	A***********D	6.32	50
Health Teachers	A***********D	6.25	58
H/Econ. Teachers	A**********D	5.56	129
T/I Teachers	A**********D	4.65	153
Tech. Teachers	A**********D	4.67	33

65. Provide handicapped students with opportunities for a wide range of social experiences through voc. organizations.

	1 2 3 4 5	NEED INDEX	N
	+.....+.....+.....+.....+		
ACROSS ALL GROUPS	A**********D	5.16	587
Agri. Teachers	A********D	3.46	44
Office Teachers	A**********D	5.23	122
Distr. Teachers	A***********D	6.37	50
Health Teachers	A**********D	5.45	56
H/Econ. Teachers	A**********D	5.33	130
T/I Teachers	A**********D	5.03	153
Tech. Teachers	A**********D	4.76	32

66. Knowledge of barriers that have inhibited training and employment of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
	+.....+.....+.....+.....+		
ACROSS ALL GROUPS	A**********D	5.45	583
Agri. Teachers	A**********D	3.95	44
Office Teachers	A**********D	5.21	123
Distr. Teachers	A**********D	5.69	49
Health Teachers	A***********D	6.20	59
H/Econ. Teachers	A**********D	5.98	127
T/I Teachers	A**********D	5.52	148
Tech. Teachers	A**********D	4.46	33

TABLE 16

(Continued)

67. Knowledge of ethical and legal standards appropriate for working with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.33	583
Agri. Teachers	A**********D	5.48	44
Office Teachers	A**********D	6.28	121
Distr. Teachers	A**********D	6.45	49
Health Teachers	A**********D	6.64	59
H/Econ. Teachers	A**********D	6.94	127
T/I Teachers	A**********D	5.96	150
Tech. Teachers	A**********D	6.29	33

68. Knowledge of appropriate referral sources for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.46	578
Agri. Teachers	A**********D	4.89	44
Office Teachers	A**********D	6.49	121
Distr. Teachers	A**********D	7.45	48
Health Teachers	A**********D	7.68	57
H/Econ. Teachers	A**********D	6.49	128
T/I Teachers	A**********D	6.09	147
Tech. Teachers	A**********D	6.57	33

69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.69	582
Agri. Teachers	A**********D	5.76	44
Office Teachers	A**********D	6.15	121
Distr. Teachers	A**********D	6.70	48
Health Teachers	A**********D	7.99	59
H/Econ. Teachers	A**********D	7.39	127
T/I Teachers	A**********D	6.50	150
Tech. Teachers	A**********D	5.97	33

TABLE 16

(Continued)

70. Knowledge of agencies to assist handicapped students such as the health and welfare services, etc.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.43	585
Agri. Teachers	A**********D	5.94	44
Office Teachers	A**********D	6.36	122
Distr. Teachers	A**********D	5.71	49
Health Teachers	A**********D	7.94	58
H/Econ. Teachers	A**********D	6.63	128
T/I Teachers	A**********D	6.00	151
Tech. Teachers	A**********D	7.03	33

71. Knowledge of behavior modification techniques concerning handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.57	585
Agri. Teachers	A**********D	5.36	44
Office Teachers	A**********D	6.39	121
Distr. Teachers	A**********D	7.75	49
Health Teachers	A**********D	7.15	60
H/Econ. Teachers	A**********D	6.93	128
T/I Teachers	A**********D	6.26	150
Tech. Teachers	A**********D	6.18	33

72. Knowledge of suitable job placement for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	7.07	586
Agri. Teachers	A**********D	6.17	44
Office Teachers	A**********D	6.69	122
Distr. Teachers	A**********D	6.66	49
Health Teachers	A**********D	8.31	59
H/Econ. Teachers	A**********D	8.04	127
T/I Teachers	A**********D	6.47	152
Tech. Teachers	A**********D	7.31	33

TABLE 16

(Continued)

73. Career opportunities for the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	7.22	581
Agri. Teachers	A**********D	5.91	44
Office Teachers	A**********D	7.02	122
Distr. Teachers	A**********D	7.56	48
Health Teachers	A**********D	8.59	58
H/Econ. Teachers	A**********D	7.63	126
T/I Teachers	A**********D	6.72	151
Tech. Teachers	A**********D	7.65	32

74. Machinery, tool and physical facility modifications for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.48	585
Agri. Teachers	A**********D	4.49	44
Office Teachers	A**********D	6.74	123
Distr. Teachers	A**********D	7.20	49
Health Teachers	A**********D	7.23	60
H/Econ. Teachers	A**********D	7.15	125
T/I Teachers	A**********D	5.80	152
Tech. Teachers	A**********D	6.41	32

75. Methods/procedures to utilize resource personnel related to handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.11	584
Agri. Teachers	A**********D	4.20	44
Office Teachers	A**********D	5.85	123
Distr. Teachers	A**********D	6.13	49
Health Teachers	A**********D	7.21	60
H/Econ. Teachers	A**********D	6.59	125
T/I Teachers	A**********D	6.01	151
Tech. Teachers	A**********D	6.47	32

TABLE 16

(Continued)

76. Physical and sensory limitations of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.46	582
Agri. Teachers	A**********D	5.53	44
Office Teachers	A**********D	6.84	122
Distr. Teachers	A**********D	7.23	49
Health Teachers	A**********D	6.14	59
H/Econ. Teachers	A**********D	6.78	125
T/I Teachers	A**********D	5.92	151
Tech. Teachers	A**********D	6.80	32

77. Procedure to sequence tasks to conform with learning styles, etc., of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.28	581
Agri. Teachers	A**********D	4.95	44
Office Teachers	A**********D	6.33	123
Distr. Teachers	A**********D	6.83	49
Health Teachers	A**********D	6.85	60
H/Econ. Teachers	A**********D	6.83	123
T/I Teachers	A**********D	5.80	149
Tech. Teachers	A**********D	6.15	33

78. Procedures to modify jobs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.22	569
Agri. Teachers	A**********D	5.41	44
Office Teachers	A**********D	6.45	120
Distr. Teachers	A**********D	6.59	47
Health Teachers	A**********D	6.64	60
H/Econ. Teachers	A**********D	6.81	122
T/I Teachers	A**********D	5.41	145
Tech. Teachers	A**********D	6.58	31

TABLE 16

(Continued)

79. Related services to provide the total quality aspects of a program for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.44	572
Agri. Teachers	A********D	4.74	44
Office Teachers	A**********D	6.70	118
Distr. Teachers	A**********D	7.11	49
Health Teachers	A**********D	7.55	58
H/Econ. Teachers	A**********D	6.81	122
T/I Teachers	A**********D	5.74	149
Tech. Teachers	A**********D	6.87	32

80. Appropriate expectations for the performance of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A********D	6.17	581
Agri. Teachers	A********D	5.18	44
Office Teachers	A**********D	6.48	122
Distr. Teachers	A**********D	7.50	49
Health Teachers	A**********D	6.40	59
H/Econ. Teachers	A**********D	6.56	124
T/I Teachers	A********D	5.44	150
Tech. Teachers	A********D	5.79	33

81. Methods and procedures to identify needs and interests of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.72	581
Agri. Teachers	A********D	4.00	44
Office Teachers	A**********D	7.13	122
Distr. Teachers	A**********D	7.34	49
Health Teachers	A**********D	7.13	58
H/Econ. Teachers	A**********D	6.68	124
T/I Teachers	A**********D	6.59	152
Tech. Teachers	A**********D	6.99	32

TABLE 16

(Continued)

82. Learner selection of criteria to assure accessibility of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.04	571
Agri. Teachers	A**********D	4.26	44
Office Teachers	A**********D	5.96	120
Distr. Teachers	A**********D	6.12	49
Health Teachers	A**********D	7.61	58
H/Econ. Teachers	A**********D	6.17	122
T/I Teachers	A**********D	5.95	147
Tech. Teachers	A**********D	5.97	31

83. How to interpret reports of other professionals such as psychological evaluations, etc.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	7.48	588
Agri. Teachers	A**********D	6.07	44
Office Teachers	A**********D	7.47	122
Distr. Teachers	A**********D	7.07	50
Health Teachers	A**********D	6.94	61
H/Econ. Teachers	A**********D	8.17	127
T/I Teachers	A**********D	7.73	151
Tech. Teachers	A**********D	7.06	33

84. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.73	584
Agri. Teachers	A**********D	5.15	44
Office Teachers	A**********D	6.93	121
Distr. Teachers	A**********D	6.98	50
Health Teachers	A**********D	7.62	61
H/Econ. Teachers	A**********D	7.03	127
T/I Teachers	A**********D	6.51	149
Tech. Teachers	A**********D	5.91	32

TABLE 16

(Continued)

85. Devising flexible time limits based upon individual rates of progress.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.46	582
Agri. Teachers	A**********D	4.24	44
Office Teachers	A**********D	5.49	120
Distr. Teachers	A**********D	6.27	50
Health Teachers	A**********D	6.65	61
H/Econ. Teachers	A**********D	5.69	127
T/I Teachers	A**********D	4.96	148
Tech. Teachers	A**********D	4.92	32

86. Sensory, physical, emotional, social, and cognitive states of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.71	580
Agri. Teachers	A**********D	6.08	44
Office Teachers	A**********D	6.70	119
Distr. Teachers	A**********D	6.93	50
Health Teachers	A**********D	7.37	61
H/Econ. Teachers	A**********D	7.16	127
T/I Teachers	A**********D	6.13	147
Tech. Teachers	A**********D	6.93	32

87. How to recognize students with learning problems in regular class.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.42	582
Agri. Teachers	A**********D	5.04	44
Office Teachers	A**********D	6.76	121
Distr. Teachers	A**********D	7.31	50
Health Teachers	A**********D	7.13	60
H/Econ. Teachers	A**********D	6.22	126
T/I Teachers	A**********D	6.15	148
Tech. Teachers	A**********D	6.35	33

TABLE 16

(Continued)

88. Individualized education plan (IEP) for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.90	581
Agri. Teachers	A**********D	5.24	44
Office Teachers	A**********D	6.24	121
Distr. Teachers	A**********D	6.74	50
Health Teachers	A**********D	7.63	60
H/Econ. Teachers	A**********D	5.69	127
T/I Teachers	A**********D	5.05	148
Tech. Teachers	A**********D	5.62	31

89. Job requirements in occupations applicable to the handicapped.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.95	588
Agri. Teachers	A**********D	6.07	44
Office Teachers	A**********D	7.18	123
Distr. Teachers	A**********D	6.69	50
Health Teachers	A**********D	8.94	61
H/Econ. Teachers	A**********D	7.14	127
T/I Teachers	A**********D	6.30	150
Tech. Teachers	A**********D	6.40	33

90. Differing capabilities of handicapped students relative to the severity of their disability.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.78	583
Agri. Teachers	A**********D	5.63	44
Office Teachers	A**********D	6.92	122
Distr. Teachers	A**********D	7.20	50
Health Teachers	A**********D	7.77	61
H/Econ. Teachers	A**********D	7.14	126
T/I Teachers	A**********D	5.99	149
Tech. Teachers	A**********D	7.65	31

TABLE 16

(Continued)

91. Federal and state laws concerning vocational education, vocational rehabilitation, and special education.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.94	586
Agri. Teachers	A**********D	6.18	44
Office Teachers	A**********D	6.96	122
Distr. Teachers	A**********D	6.82	50
Health Teachers	A**********D	8.57	61
H/Econ. Teachers	A**********D	6.75	127
T/I Teachers	A**********D	6.40	149
Tech. Teachers	A**********D	8.36	33

92. Causes for and results of low self-esteem for a handicapped individual.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.82	581
Agri. Teachers	A**********D	5.66	44
Office Teachers	A**********D	7.21	120
Distr. Teachers	A**********D	7.07	50
Health Teachers	A**********D	7.57	60
H/Econ. Teachers	A**********D	7.08	127
T/I Teachers	A**********D	6.21	149
Tech. Teachers	A**********D	7.00	31

93. Behavior observation skills for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.36	578
Agri. Teachers	A**********D	5.24	44
Office Teachers	A**********D	6.43	119
Distr. Teachers	A**********D	6.57	50
Health Teachers	A**********D	7.08	60
H/Econ. Teachers	A**********D	6.57	127
T/I Teachers	A**********D	5.96	147
Tech. Teachers	A**********D	6.95	31

TABLE 16

(Continued)

94. How to integrate and actively involve handicapped students into student vocational organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.37	578
Agri. Teachers	A*******D	3.31	44
Office Teachers	A**********D	5.77	119
Distr. Teachers	A**********D	5.17	50
Health Teachers	A**********D	6.57	60
H/Econ. Teachers	A**********D	5.46	126
T/I Teachers	A**********D	5.19	148
Tech. Teachers	A**********D	5.36	31

95. Leadership roles for handicapped students in vocational organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.54	577
Agri. Teachers	A********D	3.34	44
Office Teachers	A**********D	6.00	117
Distr. Teachers	A**********D	6.04	50
Health Teachers	A**********D	6.80	60
H/Econ. Teachers	A**********D	5.65	126
T/I Teachers	A**********D	5.27	149
Tech. Teachers	A**********D	4.78	31

96. Role and importance of student organizations in the development of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.28	575
Agri. Teachers	A********D	3.45	44
Office Teachers	A**********D	5.71	117
Distr. Teachers	A**********D	6.48	50
Health Teachers	A**********D	5.96	59
H/Econ. Teachers	A**********D	5.51	126
T/I Teachers	A**********D	4.71	148
Tech. Teachers	A**********D	4.86	31

A comparison of the training needs for each vocational teacher training program area as perceived by responding teacher educators is presented in Table 17. As with Table 16, Table 17 shows a comparison across all program areas by need index with an accompanying graphic illustration of the present (A) and desired (D) development level. This table also indicates the need index related to the degree of difference between the present and desired level of competency development. Therefore the need index is an indication of the training priority and not of the present or for that matter the desired level of development.

The N may change for each responding group of teacher educators on each statement since respondents not checking an item were not counted for the respective statement. This table provides a graphic illustration which shows immediately the differences in the training needs for the vocational program areas for each competency and knowledge statement as determined for vocational teacher educators. Again little practical difference was found across the program areas as determined by the vocational teacher educators for training priorities.

TABLE 17

A comparison of training needs for vocational teacher educators for all program areas

1. Identify types of barriers that have inhibited training and employment of handicapped persons.

	1 2 3 4 5	NEED INDEX	N[3]
ACROSS ALL GROUPS	A**********D[2]	4.88	114
Agri. Tch/Educ	A**********D	4.00	10
Office Tch/Educ	A***********D	5.09	22
Distr. Tch/Educ	A********D	2.81	8
Health Tch/Educ	A*****D	1.87	4
H/Econ Tch/Educ	A**********D	5.80	32
T/I Tch/Educator	A***********D	5.04	37
Tech. Tch/Educ	A**********D	5.00	1

2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A***********D	5.09	116
Agri. Tch/Educ	A***********D	5.33	10
Office Tch/Educ	A**********D	3.97	22
Distr. Tch/Educ	A**********D	3.50	8
Health Tch/Educ	A********D	2.81	4
H/Econ Tch/Educ	A**********D	5.95	33
T/I Tch/Educator	A***********D	5.54	38
Tech. Tch/Educ	A**********D	8.00	1

3. Use and supervise service personnel in providing vocational training for handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A***********D	5.05	110
Agri. Tch/Educ	A**********D	5.60	10
Office Tch/Educ	A**********D	5.00	22
Distr. Tch/Educ	A**********D	3.62	8
Health Tch/Educ	X	0.00	3
H/Econ Tch/Educ	A**********D	6.65	30
T/I Tch/Educator	A**********D	4.30	36
Tech. Tch/Educ	A**********D	8.00	1

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[1] A Actual (present) level of competency or knowledge development.

[2] D Desired level of competency or knowledge development.

[3] N Missing responses have been omitted; therefore the N will vary per statement.

TABLE 17

(Continued)

4. Identify and participate in professional organizations concerned with handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	3.92	115
Agri. Tch/Educ	A**********D	4.90	10
Office Tch/Educ	A**********D	3.96	22
Distr. Tch/Educ	A********D	3.06	8
Health Tch/Educ	A**D	.69	4
H/Econ Tch/Educ	A**********D	4.28	34
T/I Tch/Educator	A**********D	4.03	36
Tech. Tch/Educ	X	0.00	1

5. Maintain ethical and legal standards appropriate for working with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.98	112
Agri. Tch/Educ	A**********D	6.02	10
Office Tch/Educ	A**********D	5.10	21
Distr. Tch/Educ	A****D	2.00	8
Health Tch/Educ	A****D	1.87	4
H/Econ Tch/Educ	A**********D	4.76	30
T/I Tch/Educator	A**********D	5.75	38
Tech. Tch/Educ	A********************D	10.00	1

6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.16	115
Agri. Tch/Educ	A**********D	7.48	10
Office Tch/Educ	A**********D	6.39	21
Distr. Tch/Educ	A*******D	2.81	8
Health Tch/Educ	A*D	1.00	4
H/Econ Tch/Educ	A**********D	5.66	33
T/I Tch/Educator	A*********D	4.35	38
Tech. Tch/Educ	A********************D	10.00	1

TABLE 17

(Continued)

7. Communicate effectively with other professionals to solve problems of the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.15	115
Agri. Tch/Educ	A**********D	5.04	10
Office Tch/Educ	A**********D	4.57	22
Distr. Tch/Educ	A******D	3.00	8
Health Tch/Educ	A*D	.88	4
H/Econ Tch/Educ	A**************D	5.84	32
T/I Tch/Educator	A**********D	5.85	38
Tech. Tch/Educ	A********************D	10.00	1

8. Refer students with special problems to appropriate sources.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.37	113
Agri. Tch/Educ	A**************D	6.16	10
Office Tch/Educ	A**********D	4.76	22
Distr. Tch/Educ	A*********D	4.25	8
Health Tch/Educ	A*********D	4.00	4
H/Econ Tch/Educ	A***************D	6.94	31
T/I Tch/Educator	A*********D	4.67	37
Tech. Tch/Educ	A*********D	5.00	1

9. Assist handicapped students in developing social, physical, and emotional security for future employment.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A****************D	7.16	113
Agri. Tch/Educ	A***************D	6.40	10
Office Tch/Educ	A****************D	7.22	22
Distr. Tch/Educ	A**********D	4.36	8
Health Tch/Educ	A*******D	2.81	4
H/Econ Tch/Educ	A******************D	8.70	32
T/I Tch/Educator	A****************D	7.22	37

TABLE 17

(Continued)

13. Counsel parents/guardians of handicapped students regarding their child's vocational education/career plans.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.68	114
Agri. Tch/Educ	A**********D	5.60	10
Office Tch/Educ	A**********D	5.57	22
Distr. Tch/Educ	A**********D	5.81	8
Health Tch/Educ	A*******D	2.44	4
H/Econ Tch/Educ	A**********D	7.64	33
T/I Tch/Educator	A**********D	7.52	37

14. Interpret occupational tests and inventories to students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.25	114
Agri. Tch/Educ	A*********D	3.84	10
Office Tch/Educ	A**********D	4.67	22
Distr. Tch/Educ	A**********D	8.50	8
Health Tch/Educ	A*********D	3.00	4
H/Econ Tch/Educ	A**********D	6.44	33
T/I Tch/Educator	A*********D	4.53	37

15. Develop two way communication during conferences with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.35	112
Agri. Tch/Educ	A********D	3.51	10
Office Tch/Educ	A**********D	5.02	22
Distr. Tch/Educ	A**********D	6.56	8
Health Tch/Educ	A*D	1.00	4
H/Econ Tch/Educ	A**********D	6.14	31
T/I Tch/Educator	A**********D	5.66	37

TABLE 17

(Continued)

16. Assist handicapped students in developing good study habits related to vocational training.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.23	114
Agri. Tch/Educ	A**********D	4.18	10
Office Tch/Educ	A**********D	4.49	22
Distr. Tch/Educ	A**********D	4.00	8
Health Tch/Educ	A****D	2.00	4
H/Econ Tch/Educ	A**********D	6.04	33
T/I Tch/Educator	A**********D	5.93	37

17. Conduct a purposeful home and community visit for each handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.66	114
Agri. Tch/Educ	A**********D	3.84	10
Office Tch/Educ	A**********D	2.88	22
Distr. Tch/Educ	A**********D	6.80	8
Health Tch/Educ	A**********D	3.50	4
H/Econ Tch/Educ	A**********D	5.44	33
T/I Tch/Educator	A**********D	5.08	37

18. Assess the ability of the handicapped individual to modify his/her behavior.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.01	113
Agri. Tch/Educ	A**********D	6.56	10
Office Tch/Educ	A**********D	4.17	22
Distr. Tch/Educ	A**********D	5.61	7
Health Tch/Educ	A****D	1.62	4
H/Econ Tch/Educ	A**********D	8.51	32
T/I Tch/Educator	A**********D	5.70	37
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

19. Assist in developing suitable job placement for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.79	114
Agri. Tch/Educ	A**********D	5.60	10
Office Tch/Educ	A**********D	7.30	22
Distr. Tch/Educ	A**********D	7.35	7
Health Tch/Educ	A**********D	3.75	4
H/Econ Tch/Educ	A**********D	7.62	33
T/I Tch/Educator	A**********D	6.46	37
Tech. Tch/Educ	A**********D	3.00	1

20. Assist each handicapped student to develop and maintain a positive self-concept.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.27	114
Agri. Tch/Educ	A**********D	6.88	10
Office Tch/Educ	A**********D	5.32	22
Distr. Tch/Educ	A**********D	5.51	7
Health Tch/Educ	A**********D	4.75	4
H/Econ Tch/Educ	A**********D	7.21	33
T/I Tch/Educator	A**********D	6.39	37
Tech. Tch/Educ	X	0.00	1

21. Assist parents and other teachers in interpreting vocational programs/services for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.90	115
Agri. Tch/Educ	A**********D	4.18	10
Office Tch/Educ	A**********D	5.09	22
Distr. Tch/Educ	A**********D	4.73	7
Health Tch/Educ	A**********D	2.62	4
H/Econ Tch/Educ	A**********D	7.33	33
T/I Tch/Educator	A**********D	6.32	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

22. Identify and provide orientation for potential employers of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	7.32	115
Agri. Tch/Educ	A**********D	5.78	10
Office Tch/Educ	A**********D	7.46	22
Distr. Tch/Educ	A**********D	8.29	7
Health Tch/Educ	A**********D	6.00	4
H/Econ Tch/Educ	A**********D	7.46	33
T/I Tch/Educator	A**********D	7.74	38
Tech. Tch/Educ	X	0.00	1

23. Cooperate with appropriate agencies/groups in identifying career opportunities for handicapped students.

	4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.24	115
Agri. Tch/Educ	A**********D	6.60	10
Office Tch/Educ	A**********D	5.70	22
Distr. Tch/Educ	A**********D	8.27	7
Health Tch/Educ	A**********D	4.00	4
H/Econ Tch/Educ	A**********D	8.03	33
T/I Tch/Educator	A**********D	4.92	38
Tech. Tch/Educ	A**********D	4.00	1

24. Influence attitudes of regular school personnel/students toward accepting handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.82	115
Agri. Tch/Educ	A**********D	4.84	10
Office Tch/Educ	A**********D	4.74	22
Distr. Tch/Educ	A**********D	7.84	7
Health Tch/Educ	A**********D	2.12	4
H/Econ Tch/Educ	A**********D	8.48	33
T/I Tch/Educator	A**********D	4.81	38
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

25. Utilize a variety of teaching methods and techniques to provide instruction for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.79	116
Agri. Tch/Educ	A**********D	5.40	10
Office Tch/Educ	A**********D	5.87	22
Distr. Tch/Educ	A**********D	6.53	7
Health Tch/Educ	A**D	1.06	4
H/Econ Tch/Educ	A**********D	6.07	34
T/I Tch/Educator	A**********D	6.19	38
Tech. Tch/Educ	X	0.00	1

26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS		4.77	115
Agri. Tch/Educ		5.88	10
Office Tch/Educ		3.73	22
Distr. Tch/Educ		3.71	7
Health Tch/Educ		4.50	4
H/Econ Tch/Educ		4.94	33
T/I Tch/Educator		5.30	38
Tech. Tch/Educ		0.00	1

27. Apply individual instructional prescriptions to all handicapped pupils in class.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.01	113
Agri. Tch/Educ	A**********D	5.33	10
Office Tch/Educ	A**********D	4.94	22
Distr. Tch/Educ	A**********D	6.29	7
Health Tch/Educ	A**********D	7.78	3
H/Econ Tch/Educ	A**********D	7.25	32
T/I Tch/Educator	A**********D	5.83	38
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

28. Use the basic principles of learning theory/behavior modification related to vocational instruction (handicapped).

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.83	115
Agri. Tch/Educ	A**********D	4.20	10
Office Tch/Educ	A**********D	4.18	22
Distr. Tch/Educ	A**********D	5.33	7
Health Tch/Educ	A********D	3.56	4
H/Econ Tch/Educ	A**********D	6.48	33
T/I Tch/Educator	A**********D	4.15	38
Tech. Tch/Educ	X	0.00	1

29. Interact positively and naturally with the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.42	116
Agri. Tch/Educ	A*********D	3.78	10
Office Tch/Educ	A********D	3.11	22
Distr. Tch/Educ	A*********D	3.67	7
Health Tch/Educ	A*******D	3.37	4
H/Econ Tch/Educ	A**********D	5.71	34
T/I Tch/Educator	A**********D	4.51	38
Tech. Tch/Educ	A**********D	5.00	1

30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.82	115
Agri. Tch/Educ	A**********D	5.16	10
Office Tch/Educ	A**********D	3.77	22
Distr. Tch/Educ	A**********D	3.86	7
Health Tch/Educ	A**D	1.06	4
H/Econ Tch/Educ	A**********D	6.79	33
T/I Tch/Educator	A**********D	4.32	38
Tech. Tch/Educ	A**********D	5.00	1

TABLE 17

(Continued)

31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.05	112
Agri. Tch/Educ	A**********D	5.85	10
Office Tch/Educ	A**********D	5.38	22
Distr. Tch/Educ	A**********D	6.06	7
Health Tch/Educ	A*********D	4.00	3
H/Econ Tch/Educ	A**********D	6.87	31
T/I Tch/Educator	A**********D	6.20	38
Tech. Tch/Educ	X	0.00	1

32. Modify instructional materials and equipment for individual handicapped learner's needs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.24	115
Agri. Tch/Educ	A**********D	7.38	10
Office Tch/Educ	A**********D	5.61	22
Distr. Tch/Educ	A**********D	5.92	7
Health Tch/Educ	A*********D	4.75	4
H/Econ Tch/Educ	A**********D	6.88	33
T/I Tch/Educator	A**********D	6.17	38
Tech. Tch/Educ	X	0.00	1

33. Develop a procedure for fulfilling an individual instructional prescription in the classroom/laboratory.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.04	115
Agri. Tch/Educ	A*********D	3.90	10
Office Tch/Educ	A********D	3.42	22
Distr. Tch/Educ	A**********D	5.31	7
Health Tch/Educ	A**********D	5.94	4
H/Econ Tch/Educ	A**********D	6.43	33
T/I Tch/Educator	A**********D	5.12	38
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

34. Select cooperative training stations for individual handicapped learners.

	1	2	3	4	5	NEED INDEX	N
ACROSS ALL GROUPS			A**********D			5.64	114
Agri. Tch/Educ			A********D			3.15	10
Office Tch/Educ			A**********D			5.25	22
Distr. Tch/Educ			A**********D			6.86	7
Health Tch/Educ			A**********D			5.78	3
H/Econ Tch/Educ			A**********D			7.03	33
T/I Tch/Educator			A**********D			5.39	38
Tech. Tch/Educ		X				0.00	1

35. Translate statements describing physical/sensory limitations into statements concerning instructional limitations.

	1	2	3	4	5	NEED INDEX	N
ACROSS ALL GROUPS			A**********D			5.98	114
Agri. Tch/Educ			A**********D			5.32	10
Office Tch/Educ			A**********D			4.45	22
Distr. Tch/Educ			A**********D			6.37	7
Health Tch/Educ			A*******D			3.00	4
H/Econ Tch/Educ			A**********D			7.81	32
T/I Tch/Educator			A**********D			6.02	38
Tech. Tch/Educ			X			0.00	1

36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential.

	1	2	3	4	5	NEED INDEX	N
ACROSS ALL GROUPS			A**********D			5.54	115
Agri. Tch/Educ			A**********D			5.04	10
Office Tch/Educ			A**********D			4.96	22
Distr. Tch/Educ			A**********D			5.31	7
Health Tch/Educ			A********D			3.19	4
H/Econ Tch/Educ			A**********D			7.35	33
T/I Tch/Educator			A**********D			4.97	38
Tech. Tch/Educ			X			0.00	1

TABLE 17

(Continued)

37. Provide teaching strategies/delivery systems based upon individual learning styles/abilities of students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.89	116
Agri. Tch/Educ	A**********D	5.16	10
Office Tch/Educ	A**********D	5.08	22
Distr. Tch/Educ	A**********D	5.92	7
Health Tch/Educ	A**********D	5.00	4
H/Econ Tch/Educ	A**********D	7.48	34
T/I Tch/Educator	A**********D	5.26	38
Tech. Tch/Educ	A**********D	5.00	1

38. Revise methods of performing tasks.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.09	115
Agri. Tch/Educ	A**********D	4.92	10
Office Tch/Educ	A**********D	4.17	22
Distr. Tch/Educ	A********D	2.82	7
Health Tch/Educ	A**********D	5.94	4
H/Econ Tch/Educ	A**********D	6.00	33
T/I Tch/Educator	A**********D	5.22	38
Tech. Tch/Educ	A**********D	10.00	1

39. Develop appropriate attitudes of non-handicapped students toward handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.21	114
Agri. Tch/Educ	A******D	2.94	10
Office Tch/Educ	A**********D	5.57	22
Distr. Tch/Educ	A*******D	3.18	7
Health Tch/Educ	A****D	1.75	4
H/Econ Tch/Educ	A**********D	6.04	33
T/I Tch/Educator	A**********D	5.89	37
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.45	114
Agri. Tch/Educ	A********D	3.06	10
Office Tch/Educ	A**********D	3.86	22
Distr. Tch/Educ	A**********D	7.16	7
Health Tch/Educ	A**********D	5.78	3
H/Econ Tch/Educ	A**********D	7.10	33
T/I Tch/Educator	A**********D	5.37	38
Tech. Tch/Educ	A**********D	5.00	1

41. Modify/adapt when necessary the tools, equipment/facilities/ conditions in the learning environment.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.14	115
Agri. Tch/Educ	A**********D	3.60	10
Office Tch/Educ	A**********D	4.36	22
Distr. Tch/Educ	A**********D	6.61	7
Health Tch/Educ	A**********D	5.62	4
H/Econ Tch/Educ	A**********D	8.65	33
T/I Tch/Educator	A**********D	5.91	38
Tech. Tch/Educ	A**********D	4.00	1

42. Assist in a long range plan for integrating the handicapped student into the vocational educational program.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.90	114
Agri. Tch/Educ	A**********D	6.88	10
Office Tch/Educ	A**********D	7.93	22
Distr. Tch/Educ	A**********D	5.71	7
Health Tch/Educ	A*******D	3.00	4
H/Econ Tch/Educ	A**********D	8.55	32
T/I Tch/Educator	A**********D	5.69	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

43. Define appropriate expectations for laboratory/cooperative work performance of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.47	115
Agri. Tch/Educ	A**********D	4.94	10
Office Tch/Educ	A**********D	4.24	22
Distr. Tch/Educ	A**********D	6.61	7
Health Tch/Educ	A**********D	3.75	4
H/Econ Tch/Educ	A**********D	7.07	33
T/I Tch/Educator	A**********D	5.16	38
Tech. Tch/Educ	X	0.00	1

44. Identify needs and interests of the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.98	116
Agri. Tch/Educ	A**********D	4.68	10
Office Tch/Educ	A**********D	3.95	22
Distr. Tch/Educ	A**********D	3.71	7
Health Tch/Educ	A**********D	4.50	4
H/Econ Tch/Educ	A**********D	6.22	34
T/I Tch/Educator	A**********D	5.03	38
Tech. Tch/Educ	X	0.00	1

45. Conduct parent/teacher conferences for planning instructional programs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.86	114
Agri. Tch/Educ	A**********D	4.18	10
Office Tch/Educ	A**********D	4.45	22
Distr. Tch/Educ	A**********D	5.61	7
Health Tch/Educ	A**********D	3.67	3
H/Econ Tch/Educ	A**********D	6.94	33
T/I Tch/Educator	A**********D	6.71	38
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

46. Revise selection criteria to ensure program accessibility for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.46	113
Agri. Tch/Educ	A**********D	5.74	10
Office Tch/Educ	A**********D	4.21	22
Distr. Tch/Educ	A**********D	3.43	7
Health Tch/Educ	A******D	1.78	3
H/Econ Tch/Educ	A**********D	6.03	32
T/I Tch/Educator	A**********D	6.56	38
Tech. Tch/Educ	X	0.00	1

47. Develop an integrated program for each handicapped student in cooperation with special education teachers.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.75	115
Agri. Tch/Educ	A**********D	7.74	10
Office Tch/Educ	A**********D	5.52	22
Distr. Tch/Educ	A**********D	7.43	7
Health Tch/Educ	A******D	2.62	4
H/Econ Tch/Educ	A**********D	8.10	33
T/I Tch/Educator	A**********D	4.63	38
Tech. Tch/Educ	X	0.00	1

48. Develop instructional activities by clustering/sequencing related tasks according to student's needs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.83	115
Agri. Tch/Educ	A**********D	5.60	10
Office Tch/Educ	A**********D	6.02	22
Distr. Tch/Educ	A**********D	5.14	7
Health Tch/Educ	A*******D	3.19	4
H/Econ Tch/Educ	A**********D	6.20	33
T/I Tch/Educator	A**********D	5.89	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

49. Select, adapt, or develop instructional materials for use with handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.53	115
Agri. Tch/Educ	A**********D	6.97	10
Office Tch/Educ	A**********D	5.64	22
Distr. Tch/Educ	A**********D	5.92	7
Health Tch/Educ	A**********D	7.12	4
H/Econ Tch/Educ	A**********D	7.80	33
T/I Tch/Educator	A**********D	6.02	38
Tech. Tch/Educ	A**********D	4.00	1

50. Develop instructional units revolving around job-specific concepts and skills and needs/abilities of handicapped.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.39	116
Agri. Tch/Educ	A**********D	4.81	10
Office Tch/Educ	A**********D	3.69	22
Distr. Tch/Educ	A**********D	5.71	7
Health Tch/Educ	A**********D	5.62	4
H/Econ Tch/Educ	A**********D	7.63	34
T/I Tch/Educator	A**********D	4.51	38
Tech. Tch/Educ	A**********D	4.00	1

51. Devise flexible time limits based upon individual rates of progress.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.00	114
Agri. Tch/Educ	A**********D	5.46	10
Office Tch/Educ	A*******D	2.84	22
Distr. Tch/Educ	A**********D	5.14	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.02	33
T/I Tch/Educator	A**********D	4.54	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

52. Utilize information obtained from related disciplines about the sensory, etc., abilities of students to progress.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.77	115
Agri. Tch/Educ	A**********D	4.56	10
Office Tch/Educ	A********D	3.14	22
Distr. Tch/Educ	A**********D	5.10	7
Health Tch/Educ	A********D	2.81	4
H/Econ Tch/Educ	A**********D	6.13	33
T/I Tch/Educator	A**********D	4.81	38
Tech. Tch/Educ	A**********D	4.00	1

53. Develop an awareness of how to recognize students with learning problems in the regular class.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.03	114
Agri. Tch/Educ	A**********D	6.02	10
Office Tch/Educ	A**********D	5.05	22
Distr. Tch/Educ	A**********D	4.14	7
Health Tch/Educ	A**********D	10.00	4
H/Econ Tch/Educ	A**********D	6.84	32
T/I Tch/Educator	A**********D	5.93	38
Tech. Tch/Educ	A**********D	5.00	1

54. Use diagnostic/descriptive assessment techniques for planning instruction.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.14	114
Agri. Tch/Educ	A**********D	4.94	10
Office Tch/Educ	A**********D	4.85	22
Distr. Tch/Educ	A**********D	4.78	7
Health Tch/Educ	A**********D	6.75	4
H/Econ Tch/Educ	A**********D	7.94	32
T/I Tch/Educator	A**********D	5.96	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

55. Identify the services needed to increase handicapped students' chances in regular programs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.71	114
Agri. Tch/Educ	A********D	3.42	10
Office Tch/Educ	A**********D	4.49	22
Distr. Tch/Educ	A**********D	5.84	7
Health Tch/Educ	A**********D	6.75	4
H/Econ Tch/Educ	A**********D	7.04	32
T/I Tch/Educator	A**********D	5.73	38
Tech. Tch/Educ	A**********D	10.00	1

56. Assist in the development of individualized education programs (IEP) for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.99	116
Agri. Tch/Educ	A*********D	3.70	10
Office Tch/Educ	A********D	3.80	22
Distr. Tch/Educ	A**********D	6.86	7
Health Tch/Educ	A**********D	6.75	4
H/Econ Tch/Educ	A**********D	7.35	34
T/I Tch/Educator	A**********D	6.63	38
Tech. Tch/Educ	X	0.00	1

57. Evaluate a student's performance according to the objectives on the individualized education plan (IEP).

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.76	115
Agri. Tch/Educ	A**********D	4.29	10
Office Tch/Educ	A*******D	2.88	22
Distr. Tch/Educ	A**********D	6.12	7
Health Tch/Educ	A**********D	5.33	3
H/Econ Tch/Educ	A**********D	7.20	34
T/I Tch/Educator	A**********D	6.55	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.72	115
Agri. Tch/Educ	A**********D	5.88	10
Office Tch/Educ	A**********D	5.45	22
Distr. Tch/Educ	A**********D	5.84	7
Health Tch/Educ	A**********D	7.22	3
H/Econ Tch/Educ	A**********D	7.62	34
T/I Tch/Educator	A**********D	7.08	38
Tech. Tch/Educ	A**********D	4.00	1

59. Develop behavior observation skills concerning handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.25	114
Agri. Tch/Educ	A******D	2.66	10
Office Tch/Educ	A**********D	5.26	22
Distr. Tch/Educ	A**********D	6.61	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.99	33
T/I Tch/Educator	A**********D	6.51	38
Tech. Tch/Educ	A**********D	4.00	1

60. Obtain follow-up information on handicapped students learning or graduating from school programs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.57	114
Agri. Tch/Educ	A**********D	4.56	10
Office Tch/Educ	A**********D	5.15	22
Distr. Tch/Educ	A*******D	3.18	7
Health Tch/Educ	A*******D	2.44	3
H/Econ Tch/Educ	A**********D	7.16	33
T/I Tch/Educator	A**********D	5.46	38
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

61. Conduct a comprehensive evaluation of the total vocational program for needs of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.97	112
Agri. Tch/Educ	A*********D	3.40	10
Office Tch/Educ	A***************D	5.88	21
Distr. Tch/Educ	A*****************D	6.61	7
Health Tch/Educ	A****D	1.62	4
H/Econ Tch/Educ	A***************D	5.79	33
T/I Tch/Educator	A**********D	4.21	36
Tech. Tch/Educ	A*******************D	8.00	1

62. Demonstrate personal commitment concerning handicapped students' participation in vocational organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.57	115
Agri. Tch/Educ	A*******D	3.20	10
Office Tch/Educ	A**********D	4.04	22
Distr. Tch/Educ	A**********D	4.41	7
Health Tch/Educ	A**D	.81	4
H/Econ Tch/Educ	A**********D	5.52	33
T/I Tch/Educator	A**********D	4.85	38
Tech. Tch/Educ	A*********D	5.00	1

63. Integrate/actively involve handicapped students in an on-going student vocational organization.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.39	116
Agri. Tch/Educ	A*********D	3.60	10
Office Tch/Educ	A***********D	5.33	22
Distr. Tch/Educ	A********D	3.31	7
Health Tch/Educ	A**D	.81	4
H/Econ Tch/Educ	A***************D	6.31	34
T/I Tch/Educator	A***************D	6.23	38
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

64. Prepare handicapped students for leadership roles in student vocational organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.82	116
Agri. Tch/Educ	A**********D	4.68	10
Office Tch/Educ	A**********D	6.18	22
Distr. Tch/Educ	A**********D	5.31	7
Health Tch/Educ	A**D	.81	4
H/Econ Tch/Educ	A**********D	6.85	34
T/I Tch/Educator	A**********D	5.94	38
Tech. Tch/Educ	X	0.00	1

65. Provide handicapped students with opportunities for a wide range of social experiences through voc. organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.47	116
Agri. Tch/Educ	A**********D	4.07	10
Office Tch/Educ	A**********D	5.27	22
Distr. Tch/Educ	A**********D	5.71	7
Health Tch/Educ	A****D	1.75	4
H/Econ Tch/Educ	A**********D	6.28	34
T/I Tch/Educator	A**********D	5.66	38
Tech. Tch/Educ	A**********D	4.00	1

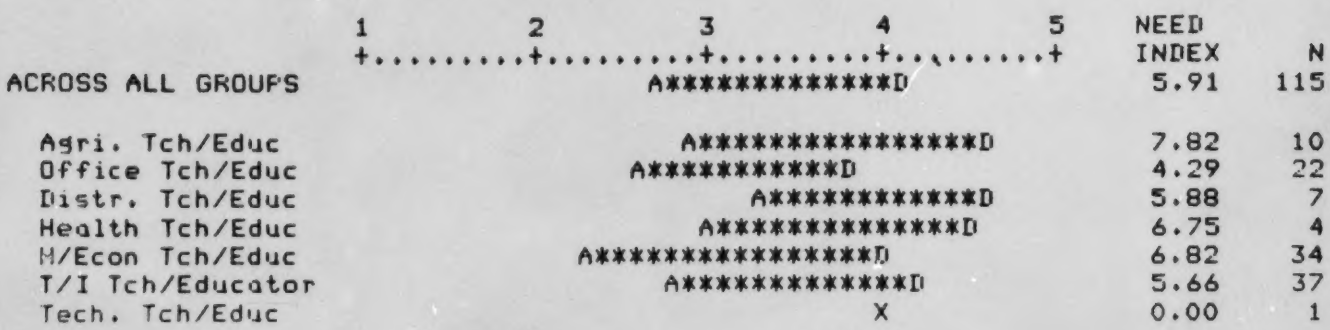
66. Knowledge of barriers that have inhibited training and employment of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.12	115
Agri. Tch/Educ	A**********D	4.51	10
Office Tch/Educ	A**********D	4.34	22
Distr. Tch/Educ	A**********D	4.90	7
Health Tch/Educ	A******D	3.00	4
H/Econ Tch/Educ	A**********D	6.09	34
T/I Tch/Educator	A**********D	5.29	37
Tech. Tch/Educ	X	0.00	1

TABLE 17

(Continued)

67. Knowledge of ethical and legal standards appropriate for working with handicapped students.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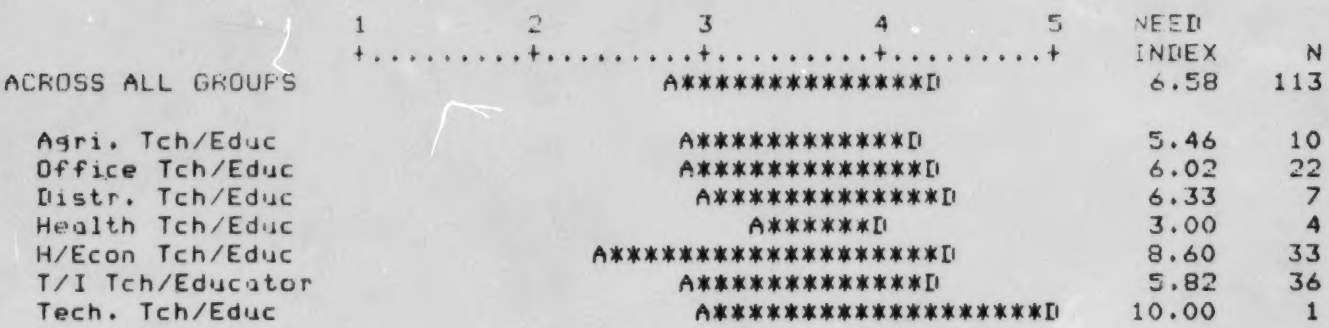
ACROSS ALL GROUPS 5.91 115
Agri. Tch/Educ 7.82 10
Office Tch/Educ 4.29 22
Distr. Tch/Educ 5.88 7
Health Tch/Educ 6.75 4
H/Econ Tch/Educ 6.82 34
T/I Tch/Educator 5.66 37
Tech. Tch/Educ 0.00 1

68. Knowledge of appropriate referral sources for handicapped students.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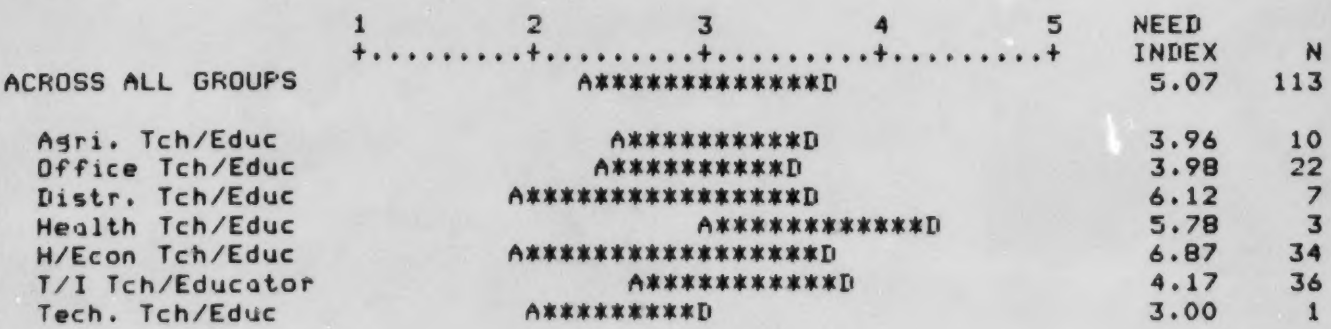
ACROSS ALL GROUPS 6.58 113
Agri. Tch/Educ 5.46 10
Office Tch/Educ 6.02 22
Distr. Tch/Educ 6.33 7
Health Tch/Educ 3.00 4
H/Econ Tch/Educ 8.60 33
T/I Tch/Educator 5.82 36
Tech. Tch/Educ 10.00 1

69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.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NEED INDEX N
ACROSS ALL GROUPS 5.07 113
Agri. Tch/Educ 3.96 10
Office Tch/Educ 3.98 22
Distr. Tch/Educ 6.12 7
Health Tch/Educ 5.78 3
H/Econ Tch/Educ 6.87 34
T/I Tch/Educator 4.17 36
Tech. Tch/Educ 3.00 1

TABLE 17

(Continued)

70. Knowledge of agencies to assist handicapped students such as the health and welfare services, etc.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.53	114
Agri. Tch/Educ	A**********D	3.70	10
Office Tch/Educ	A**********D	4.24	22
Distr. Tch/Educ	A**********D	6.61	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.48	34
T/I Tch/Educator	A**********D	5.12	37
Tech. Tch/Educ	A**********D	4.00	1

71. Knowledge of behavior modification techniques concerning handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.55	114
Agri. Tch/Educ	A**********D	6.15	10
Office Tch/Educ	A**********D	4.29	22
Distr. Tch/Educ	A**********D	7.71	7
Health Tch/Educ	A**********D	3.00	4
H/Econ Tch/Educ	A**********D	6.71	34
T/I Tch/Educator	A**********D	5.01	37
Tech. Tch/Educ	A**********D	4.00	1

72. Knowledge of suitable job placement for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.43	114
Agri. Tch/Educ	A**********D	5.25	10
Office Tch/Educ	A**********D	5.75	22
Distr. Tch/Educ	A**********D	5.92	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.81	34
T/I Tch/Educator	A**********D	6.11	37
Tech. Tch/Educ	A**********D	10.00	1

TABLE 17

(Continued)

73. Career opportunities for the handicapped student.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	7.01	113
Agri. Tch/Educ	A*****D	3.80	10
Office Tch/Educ	A**********D	6.78	21
Distr. Tch/Educ	A**********D	7.69	7
Health Tch/Educ	A*****D	4.33	3
H/Econ Tch/Educ	A**********D	8.05	34
T/I Tch/Educator	A**********D	7.11	37
Tech. Tch/Educ	A**********D	10.00	1

74. Machinery, tool and physical facility modifications for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A*********D	6.41	112
Agri. Tch/Educ	A*******D	5.20	10
Office Tch/Educ	A**********D	7.80	20
Distr. Tch/Educ	A*********D	5.61	7
Health Tch/Educ	A*****D	4.00	4
H/Econ Tch/Educ	A**********D	7.67	33
T/I Tch/Educator	A*******D	5.33	37
Tech. Tch/Educ	A*****D	5.00	1

75. Methods/procedures to utilize resource personnel related to handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A*******D	5.09	113
Agri. Tch/Educ	A*****D	3.90	10
Office Tch/Educ	A*****D	3.78	20
Distr. Tch/Educ	A*********D	5.71	7
Health Tch/Educ	A****D	3.00	4
H/Econ Tch/Educ	A*********D	6.06	34
T/I Tch/Educator	A*******D	5.44	37
Tech. Tch/Educ	A*****D	4.00	1

TABLE 17

(Continued)

76. Physical and sensory limitations of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.80	112
Agri. Tch/Educ	A**********D	4.18	10
Office Tch/Educ	A**********D	3.55	20
Distr. Tch/Educ	A**********D	5.51	7
Health Tch/Educ	A**********D	4.25	4
H/Econ Tch/Educ	A**********D	6.79	33
T/I Tch/Educator	A**********D	7.02	37
Tech. Tch/Educ	A**********D	4.00	1

77. Procedure to sequence tasks to conform with learning styles, etc., of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.83	109
Agri. Tch/Educ	A**********D	4.51	10
Office Tch/Educ	A**********D	5.14	20
Distr. Tch/Educ	A**********D	5.31	7
Health Tch/Educ	A**********D	6.75	2
H/Econ Tch/Educ	A**********D	6.37	32
T/I Tch/Educator	A**********D	6.23	37
Tech. Tch/Educ	A**********D	4.00	1

78. Procedures to modify jobs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.95	112
Agri. Tch/Educ	A**********D	5.40	10
Office Tch/Educ	A**********D	5.00	20
Distr. Tch/Educ	A**********D	6.37	7
Health Tch/Educ	A******D	2.67	3
H/Econ Tch/Educ	A**********D	7.35	34
T/I Tch/Educator	A**********D	5.62	37
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

79. Related services to provide the total quality aspects of a program for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.98	111
Agri. Tch/Educ	A**********D	5.32	10
Office Tch/Educ	A**********D	4.32	20
Distr. Tch/Educ	A**********D	8.29	7
Health Tch/Educ	A**********D	4.67	3
H/Econ Tch/Educ	A**********D	6.50	33
T/I Tch/Educator	A**********D	6.38	37
Tech. Tch/Educ	A**********D	4.00	1

80. Appropriate expectations for the performance of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.32	112
Agri. Tch/Educ	A**********D	5.74	10
Office Tch/Educ	A**********D	6.00	20
Distr. Tch/Educ	A**********D	5.51	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.66	34
T/I Tch/Educator	A**********D	5.85	37
Tech. Tch/Educ	A**********D	4.00	1

81. Methods and procedures to identify needs and interests of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.42	112
Agri. Tch/Educ	A**********D	4.94	10
Office Tch/Educ	A**********D	5.85	20
Distr. Tch/Educ	A**********D	7.10	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.43	34
T/I Tch/Educator	A**********D	6.35	37
Tech. Tch/Educ	A**********D	4.00	1

TABLE 17

(Continued)

2. Learner selection of criteria to assure accessibility of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.02	106
Agri. Tch/Educ	A**********D	5.20	10
Office Tch/Educ	A**********D	4.97	20
Distr. Tch/Educ	A**********D	5.31	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	8.13	30
T/I Tch/Educator	A**********D	5.50	35
Tech. Tch/Educ	A**********D	4.00	1

3. How to interpret reports of other professionals such as psychological evaluations, etc.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.64	112
Agri. Tch/Educ	A**********D	5.32	10
Office Tch/Educ	A**********D	4.62	20
Distr. Tch/Educ	A**********D	5.39	7
Health Tch/Educ	A**********D	4.00	3
H/Econ Tch/Educ	A**********D	8.77	34
T/I Tch/Educator	A**********D	6.79	37
Tech. Tch/Educ	A**********D	5.00	1

4. How to cluster and sequence related tasks according to individual handicapped student's abilities and needs.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.82	112
Agri. Tch/Educ	A**********D	3.60	10
Office Tch/Educ	A**********D	5.33	20
Distr. Tch/Educ	A**********D	5.31	7
Health Tch/Educ	A**********D	5.78	3
H/Econ Tch/Educ	A**********D	7.52	34
T/I Tch/Educator	A**********D	5.26	37
Tech. Tch/Educ	A**********D	5.00	1

TABLE 17

(Continued)

85. Devising flexible time limits based upon individual rates of progress.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.33	111
Agri. Tch/Educ	A********D	3.42	10
Office Tch/Educ	A**********D	4.29	20
Distr. Tch/Educ	A********D	2.82	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.38	33
T/I Tch/Educator	A**********D	5.26	37
Tech. Tch/Educ	A**********D	5.00	1

86. Sensory, physical, emotional, social, and cognitive states of handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.11	110
Agri. Tch/Educ	A**********D	5.46	10
Office Tch/Educ	A**********D	3.85	20
Distr. Tch/Educ	A**********D	5.39	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	8.51	32
T/I Tch/Educator	A**********D	5.96	37
Tech. Tch/Educ	A**********D	4.00	1

87. How to recognize students with learning problems in regular class.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.76	110
Agri. Tch/Educ	A**********D	5.74	10
Office Tch/Educ	A**********D	5.25	20
Distr. Tch/Educ	A**********D	5.51	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	8.72	32
T/I Tch/Educator	A**********D	6.59	37
Tech. Tch/Educ	A**********D	10.00	1

TABLE 17

(Continued)

88. Individualized education plan (IEP) for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.19	110
Agri. Tch/Educ	A**********D	4.18	10
Office Tch/Educ	A**********D	5.40	20
Distr. Tch/Educ	A**********D	6.29	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A**********D	7.66	32
T/I Tch/Educator	A**********D	6.12	37
Tech. Tch/Educ	A**********D	4.00	1

89. Job requirements in occupations applicable to the handicapped.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.65	111
Agri. Tch/Educ	A**********D	4.32	10
Office Tch/Educ	A**********D	6.93	20
Distr. Tch/Educ	A**********D	7.10	7
Health Tch/Educ	A**********D	2.67	3
H/Econ Tch/Educ	A**********D	8.06	33
T/I Tch/Educator	A**********D	6.26	37
Tech. Tch/Educ	A**********D	4.00	1

90. Differing capabilities of handicapped students relative to the severity of their disability.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	6.57	111
Agri. Tch/Educ	A**********D	5.32	10
Office Tch/Educ	A**********D	6.40	20
Distr. Tch/Educ	A**********D	4.59	7
Health Tch/Educ	A**********D	2.67	3
H/Econ Tch/Educ	A**********D	7.84	33
T/I Tch/Educator	A**********D	6.57	37
Tech. Tch/Educ	A**********D	10.00	1

TABLE 17

(Continued)

91. Federal and state laws concerning vocational education, vocational rehabilitation, and special education.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	4.96	112
Agri. Tch/Educ	A**********D	4.30	10
Office Tch/Educ	A*********D	3.51	20
Distr. Tch/Educ	A******D	2.86	7
Health Tch/Educ	A************D	5.78	3
H/Econ Tch/Educ	A****************D	7.09	34
T/I Tch/Educator	A**********D	4.30	37
Tech. Tch/Educ	A********************D	10.00	1

92. Causes for and results of low self-esteem for a handicapped individual.

	1 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**************D	6.25	112
Agri. Tch/Educ	A**********D	4.29	10
Office Tch/Educ	A************D	5.14	20
Distr. Tch/Educ	A**************D	5.71	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A****************D	7.49	34
T/I Tch/Educator	A**************D	6.59	37
Tech. Tch/Educ	A**********D	5.00	1

93. Behavior observation skills for handicapped students.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**************D	6.63	112
Agri. Tch/Educ	A**************D	6.30	10
Office Tch/Educ	A************D	5.14	20
Distr. Tch/Educ	A**************D	5.31	7
Health Tch/Educ	A**********D	4.33	3
H/Econ Tch/Educ	A******************D	8.19	34
T/I Tch/Educator	A**************D	6.52	37
Tech. Tch/Educ	A********************D	10.00	1

TABLE 17

(Continued)

94. How to integrate and actively involve handicapped students into student vocational organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.83	111
Agri. Tch/Educ	A*********D	3.51	10
Office Tch/Educ	A**********D	5.97	20
Distr. Tch/Educ	A*********D	3.71	7
Health Tch/Educ	A**D	1.33	3
H/Econ Tch/Educ	A**********D	6.72	33
T/I Tch/Educator	A**********D	6.46	37
Tech. Tch/Educ	A*********D	4.00	1

95. Leadership roles for handicapped students in vocational organizations.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.94	112
Agri. Tch/Educ	A**********D	4.40	10
Office Tch/Educ	A**********D	5.32	20
Distr. Tch/Educ	A**********D	4.59	7
Health Tch/Educ	A******D	2.67	3
H/Econ Tch/Educ	A**********D	6.76	34
T/I Tch/Educator	A**********D	6.69	37
Tech. Tch/Educ	X	0.00	1

96. Role and importance of student organizations in the development of handicapped persons.

	1 2 3 4 5	NEED INDEX	N
ACROSS ALL GROUPS	A**********D	5.63	111
Agri. Tch/Educ	A*********D	4.30	10
Office Tch/Educ	A**********D	4.87	20
Distr. Tch/Educ	A**********D	4.96	7
Health Tch/Educ	A**D	1.44	3
H/Econ Tch/Educ	A**********D	6.76	33
T/I Tch/Educator	A**********D	5.89	37
Tech. Tch/Educ	A*********D	4.00	1

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. Summary of Findings

The data for this study were obtained from 622 vocational teachers and 206 vocational teacher educators who were representative of the 50 States and Puerto Rico. The vocational teachers and vocational teacher educators were surveyed to determine their present level of development and their desired level of development for 96 competency and knowledge statements. The findings of this study are recapitulated below.

1. Vocational Teachers. The upper quartile of priortized training needs identified by vocational teachers is shown in Table 18. Of the upper quartile, 75 percent or 18 of the statements chosen by the vocational teachers as training priorities were knowledge as opposed to competency statements. Nine of these knowledge statements or the majority were organized in the National Needs Assessment Survey under the teacher function of Instructional Planning. Statements 81, 83, 84, 86, 87, 89, 90, 91, and 92 related to assessments of students and interpretation of the results, characteristics and capabilities of students, job placement, and legislative requirements. The highest need index was computed for competency statement number 83. Therefore the greatest training need perceived by vocational teachers was identified as how to interpret reports of other professionals.

The teacher function of Student Guidance on the National Needs Assessment Survey contained three knowledge statements ranked by the vocational teachers in the upper quartile. These three knowledge statements, 69, 71, and 72, concerned how to interpret occupational aptitude and ability tests and inventories, behavior modification techniques, and suitable job placement for handicapped students.

The next teacher function on the National Needs Assessment Survey ranked by the vocational teachers as containing training priorities was Instructional Implementation. The two knowledge statements 74 and 76 selected in the upper quartile dealt with equipment and facility modifications as well as physical and sensory limitations of handicapped persons.

In the teacher functions of Professional Role and Development, School/Community Relations, and Program Management and Evaluation, one knowledge statement each was ranked in the upper quartile--numbers 68, 73, 79, and 93. These knowledge statements respectively concerned appropriate referral sources, career opportunities, related program services, and behavior observation skills for mainstreamed, handicapped students.

Of the upper quartile, 25 percent or 6 statements chosen by the vocational teachers as training priorities were competencies. Three of these competency statements were organized in the National Needs Assessment Survey under the teacher function of Student Guidance. These three competency statements 10, 13, and 19 concerned assisting handicapped students in viewing their assets and limitations realistically, counseling parents/guardians regarding their child's vocational education and career plans, and developing suitable job placement.

One competency statement was selected from each of the teacher functions of Professional Role and Development, School/Community Relations, and Instructional Planning by vocational teachers as training priorities. These competency statements 9, 22, and 65 dealt with assisting handicapped students in obtaining and maintaining future employment, providing orientation for potential employers, and using diagnostic and prescriptive assessment techniques to plan instruction.

2. Vocational Teacher Educators. The priortized list of training needs identified by vocational teacher educators is shown in Table 19. Of the upper quartile, 50 percent or 12 of the statements chosen by the vocational teacher

educators as training priorities were competency statements; 50 percent or 12 were knowledge statements.

Five of the competency statements chosen in the upper quartile by the vocational teacher educators were organized in the National Needs Assessment Survey under the teacher function of Instructional Planning. Statements 42, 47, 49, 58, and 59 included: long-range planning for integrating the handicapped student into the vocational educational program; developing integrated programs; selecting, adapting, or developing appropriate instructional materials for use with handicapped students; determining appropriate student performance; and developing behavior observation skills.

The teacher function of Student Guidance on the National Needs Assessment Survey contained four competency statements ranked by the vocational teacher educators in the upper quartile. These four competency statements, 10, 13, 19, and 20, dealt with assisting handicapped students in viewing their assets and limitations realistically, counseling parents/guardians regarding their child's vocational education and career plans, developing suitable job placement, and assisting students to develop and maintain a positive self-concept.

In the teacher function of Professional Role and Development, School/Community Relations, and Instructional Implementation, one competency statement each was ranked in the upper quartile. Competency statements 9, 22, and 32 respectively concerned assisting handicapped students in obtaining and maintaining future employment, providing orientation for potential employers, and modifying instructional materials and equipment.

The highest need index computed for the vocational teacher educators was 7.32 for competency statement 22. Therefore the greatest training need perceived by vocational teacher educators was competency statement 22 dealing with orienting potential employers of handicapped students.

Of the upper quartile, 50 percent or 12 of the statements chosen by the vocational teacher educators as training priorities were knowledge statements. Eight of these knowledge statements were organized in the National Needs Assessment Survey under the teacher function of Instructional Planning. Questions 80, 81, 83, 87, 89, 90, 92, 93 related to the assessment of needs and interests; reasons for low self-esteem concerning handicapped students; and job requirements in occupations applicable to the handicapped.

In the teacher functions of Professional Role and Development, Student Guidance, School/Community Relations, and Instructional Implementation, one knowledge statement each was ranked in the upper quartile. Competency statements 68, 72, 73, and 74 dealt with appropriate referral sources, suitable job placement, career opportunities, and equipment and facility modifications.

The following summarizes the major points of this study.

1. There were 96 competency and knowledge statements on the National Needs Assessment Survey. One section of the survey contained 65 competency statements while the second section consisted of 31 knowledge statements. Solely for the purpose of organization, the competencies and knowledges were grouped into teacher functions. These eight teacher functions were: 1) Professional Role and Development, 2) Student Guidance, 3) School/Community Relations, 4) Instructional Implementation, 5) Program Management, 6) Instructional Planning, 7) Evaluation, and 8) Student Organization. No attempt was made during this study to justify the selection of these eight teacher functions nor to justify the inclusion of any competency or knowledge statement within a specific function.

2. All of the respondents desired training related to one or more of the 96 competency and knowledge statements identified.

3. The highest priority for training for all vocational teachers was evidenced by a need index of 8.94 with the lowest training priority and hence need index of 2.60.

4. The highest priority of training for all vocational teacher educators was evidenced by a need index of 7.32 with the lowest training priority and hence need index of 3.92.

5. There was very little practical difference in the desired levels of competency and knowledge development between vocational teachers and vocational teacher educators by teacher function.

6. In respect to the priortized training needs identified by all vocational teacher respondents, it was observed that of the upper quartile, 75 percent or 18 of the statements selected by the respondents were knowledge statements while 25 percent or 6 were competency statements.

7. In respect to the priortized training needs identified by all vocational teacher educator respondents, it was observed that of the upper quartile, 50 percent or 12 were knowledge statements and 50 percent or 12 were competency statements.

8. The highest need index computed for all vocational teacher respondents was for knowledge statement number 83. Therefore the greatest training need for all vocational teachers was identified as statement number 83--how to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.

9. The highest need index computed for all vocational teacher educator respondents was for competency statement number 22. Therefore the greatest training need for all vocational teacher educators was identified as statement number 22--identify and provide orientation for potential employers of handicapped students.

10. The upper quartile of the priortized training needs of responding agriculture teachers consisted of 15 competency statements and nine knowledge statements. Seven (7) of the competency statements were organized under the teacher function of Student Guidance, 4 were under School/Community Relations,

3 were under Instructional Implementation, and 1 competency statement was organized under the teacher function of Instructional Planning. Six (6) of the knowledge statements were placed under the teacher function of Instructional Planning, 1 was under School/Community Relations, and 2 were organized under the function of Instructional Implementation.

11. There were 12 competency statements and 12 knowledge statements in the upper quartile of the priortized list of competency and knowledge statements for the responding distributive education teachers. Of the 24 competency statements in the upper quartile, there were 6 competency statements under the teacher function of Instructional Planning, 3 under Student Guidance, 2 under Instructional Implementation, and 1 under the teacher function of Professional Role and Development. A total of 12 knowledge statements were selected in the upper quartile. Six (6) were organized under the teacher function of Instructional Planning, 3 under School/Community Relations, and 1 each under the functions of Professional Role and Development, Student Guidance, and Program Management.

12. The upper quartile of the priortized training needs of responding health occupations teachers consisted of 13 competency statements and 11 knowledge statements. Five (5) of the competency statements were under the teacher function of Instructinal Planning, 3 were under Instructional Implementation, 2 under Student Guidance, 2 under School/Community Relations, and 1 was organized under the category of Program Management. Of the 11 knowledge statements, 5 were organized under the teacher function of Instructional Planning, 3 under Student Guidance, and 1 each was organized under the teacher function of Professional Role and Development, School/Community Relations, and Program Management.

13. There were 10 competency statements and 14 knowledge statements selected by the responding home economics teachers in the upper quartile identifying training priorities. Of the 10 competency statements, 5 were organized under the

teacher function of Student Guidance, 2 under Instructional Implementation, and 1 each was organized under the teacher function of Program Management, Professional Role and Development, and School/Community Relations. Concerning knowledge statements, 6 were under the teacher function of Instructional Planning, 3 each under the functions of Student Guidance and Instructional Implementation, and 1 each under Professional Role and Development and School/Community Relations.

14. The upper quartile of the priortized training needs of responding health occupations teachers consisted of 8 competency statements and 16 knowledge statements. Of the 8 competency statements, 5 were under the teacher function of Instructional Planning while 1 each was organized under the function of Professional Role and Develoment, Student Guidance, and School/Community Relations. Of the 16 knowledge statements, 10 were organized under the function of Instructional Planning, 2 under Instructional Implementation, and 1 each under the teacher functions of Professional Role and Development, Student Guidance, School/Community Relations, and Program Management.

15. There were 7 competency statements and 17 knowledge statements selected by the responding technical teachers in the upper quartile identifying training priorities. Of the 7 competency statements, 4 were organized under the teacher function of Instructional Planning while 3 were under Student Guidance. Concerning the knowledge statements, 7 were organized under the teacher function of Instructional Planning while 4 were under Instructional Implementation, 2 under Student Guidance, and 1 each under the teacher functions of Professional Role and Development, School/Community Relations, Program Management, and Evaluation.

16. The upper quartile of the priortized training needs of responding trade and industrial teachers consisted of 9 competency statements and 15 knowledge statements. Of the 9 competency statements, 3 each were organized under the teacher functions of Student Guidance and Instructional Planning, while 1 each was

under Program Management and School/Community Relations. Of the 15 knowledge statements, 8 were organized under the teacher function of Instructional Planning, 4 under Student Guidance, and 1 each under the functions of Professional Role and Development, School/Community Relations, and Instructional Implementation.

B. Conclusions

A number of conclusions may be drawn from the findings of this study entitled "Vocational Education Personnel Development Needs For Working With The Handicapped." The considered judgment of the respondents regarding their perception of their present level of development is an effective approach for identifying their professional improvement needs for working with the handicapped. Following are specific conclusions resulting from this endeavor.

1. The National Needs Assessment Survey instrument, containing 96 competency and knowledge statements necessary to instruct handicapped students, was a satisfactory method of securing data for preservice and inservice training.
2. The responses indicated that there was a desire by all of the respondents for professional improvement in order to effectively instruct mainstreamed, handicapped students.
3. There was virtually no practical difference in the levels of desired competency development between the vocational teachers and vocational teacher educators by teacher function.
4. A comparison of the need index of each competency and knowledge statement for each vocational program area revealed that there was no practical difference in the training needs among each of the vocational program areas.
5. The priortized list of competency and knowledge statements provided an appropriate data base for the development of preservice and inservice

vocational teacher education programs to prepare vocational teachers to work with the handicapped.

6. A review of relevant literature and the findings of the study indicated that an effective program of teacher education for preparing vocational teachers to instruct mainstreamed, handicapped students can be developed based on competency and knowledge statements selected for professional improvement by the vocational teachers and vocational teacher educators.

C. Recommendations

The following recommendations are listed for consideration:

1. Since all of the 96 competency and knowledge statements were selected as being needed for professional improvement by all program areas by both vocational teachers and teacher educators, it is suggested that vocational education professional development programs be improved by revising the curriculum to include the 96 competency and knowledge statements.
2. In order to justify and confirm the need for a high level of professional development in each of the competency and knowledge statements, it is suggested that this study be replicated on a State-wide basis by each State Education Agency.
3. The findings and data from this study should be provided to each of the vocational teacher education institutions in the Nation and to each of the larger school districts who are capable of conducting their own inservice training programs for vocational teachers.
4. It is recommended that instructional modules be prepared and made available for distribution in order to expedite the inclusion of the 96 competency and knowledge statements in the vocational teacher education programs in the Nation.

5. Finally, it is recommended that a program of inservice training be designed and conducted to provide the professional improvement desired by vocational teacher educators.

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Appendix A

Needs Assessment Survey of Vocational Teachers

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT NEEDS FOR WORKING WITH THE HANDICAPPED

Needs Assessment Survey of Vocational Teachers

INSTRUCTIONS

This survey is conducted under contract number 300800865 with the Office of Vocational and Adult Education, United States Department of Education, by Educational Innovators, Inc., of Richardson, Texas.

Attached is a list of competency and knowledge statements that are needed for vocational teachers who instruct handicapped students. You are asked to identify your present level of competency and knowledge development by circling a number on a scale from one (low) to five (high).

(1) For example, if you presently have a low level of competency or knowledge development, indicate by circling one:

(1) 2 3 4 5
low high

If you presently, however, have a high level of competency or knowledge development, indicate by circling five:

1 2 3 4 (5)
low high

Circling number three would indicate an average development of the competency or knowledge; circling any other number (two or four) would indicate decreasing or increasing development levels of the competency or knowledge.

(2) In addition, please indicate the desired level of development for each competency or knowledge by circling a number on a scale from one (low) to five (high) for each competency or knowledge. For your information, the numbers in the right hand margin are keypunch numbers.

The success of this survey depends upon your cooperation. Please respond to every statement; be certain to make only one response for columns one and two. For your convenience, a self-addressed, stamped envelope is enclosed for returning the questionnaire which needs to be received by January 16, 1981. This report is authorized by law (20-U.S.C.-2401). While you are not required to respond, your cooperation is needed to make the results of this study comprehensive, accurate, and timely.

Thank you for your assistance.

Personnel Training Requirements to Serve Handicapped Populations
Needs Assessment Survey of Vocational Teachers

□□□
(1 - 3)

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High

PROFESSIONAL ROLE AND DEVELOPMENT

(5-6)

1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	1 2 3 4 5	1 2 3 4 5
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	1 2 3 4 5	1 2 3 4 5
3. Use and supervise service personnel in providing vocational training for handicapped persons.	1 2 3 4 5	1 2 3 4 5
4. Identify and participate in professional organizations concerned with handicapped persons.	1 2 3 4 5	1 2 3 4 5
5. Maintain ethical and legal standards appropriate for working with handicapped students.	1 2 3 4 5	1 2 3 4 5
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	1 2 3 4 5	1 2 3 4 5
		(17-18)
7. Communicate effectively with other professionals to solve problems of the handicapped student.	1 2 3 4 5	1 2 3 4 5
8. Refer students with special problems to appropriate sources.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
		(21-22)
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	1 2 3 4 5	1 2 3 4 5
STUDENT GUIDANCE		
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	1 2 3 4 5	1 2 3 4 5
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	1 2 3 4 5	1 2 3 4 5
12. Advise and counsel handicapped persons relative to personal and professional goals.	1 2 3 4 5	1 2 3 4 5
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	1 2 3 4 5	1 2 3 4 5
14. Interpret occupational tests and inventories to students.	1 2 3 4 5	1 2 3 4 5
15. Develop two-way communication during conferences with handicapped students.	1 2 3 4 5	1 2 3 4 5
16. Assist handicapped students in developing good study habits related to vocational training.	1 2 3 4 5	1 2 3 4 5
		(37-38)
17. Conduct a purposeful home and community visit for each handicapped student.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
		(39-40)
18. Assess the ability of the handicapped individual to modify his/her behavior.	1 2 3 4 5	1 2 3 4 5
19. Assist in developing suitable job placement for handicapped students.	1 2 3 4 5	1 2 3 4 5
20. Assist each handicapped student to develop and maintain a positive self-concept.	1 2 3 4 5	1 2 3 4 5
SCHOOL/COMMUNITY RELATIONS		
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	1 2 3 4 5	1 2 3 4 5
22. Identify and provide orientation for potential employers of handicapped students.	1 2 3 4 5	1 2 3 4 5
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	1 2 3 4 5	1 2 3 4 5
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL IMPLEMENTATION		(53-54)
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High (55-56)
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	1 2 3 4 5	1 2 3 4 5
27. Apply individual instructional prescription to all handicapped pupils in class.	1 2 3 4 5	1 2 3 4 5
28. Use the basic principles of learning theory and behavior modification related to vocational instruction for the handicapped.	1 2 3 4 5	1 2 3 4 5
29. Interact positively and naturally with the handicapped student.	1 2 3 4 5	1 2 3 4 5
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	1 2 3 4 5	1 2 3 4 5
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	1 2 3 4 5	1 2 3 4 5
32. Modify instructional materials and equipment for individual handicapped learner's needs.	1 2 3 4 5	1 2 3 4 5
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	1 2 3 4 5	1 2 3 4 5 (71-72)
34. Select cooperative training stations for individual handicapped learners.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High (77-78)
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	1 2 3 4 5	1 2 3 4 5
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	1 2 3 4 5	1 2 3 4 5 (77-78)
37. Provide teaching strategies and delvery systems based upon individual learning styles and abilities of handicapped students.	1 2 3 4 5	1 2 3 4 5 [1] (80)
38. Revise methods of performing tasks.	1 2 3 4 5	(5-6) 1 2 3 4 5
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	1 2 3 4 5	1 2 3 4 5
PROGRAM MANAGEMENT		
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	1 2 3 4 5	1 2 3 4 5
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL PLANNING		(13-14)
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High (15-16)
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	1 2 3 4 5	1 2 3 4 5
44. Identify needs and interests of the handicapped student.	1 2 3 4 5	1 2 3 4 5
45. Conduct parent/teacher conferences for planning instructional programs.	1 2 3 4 5	1 2 3 4 5
46. Revise selection criteria to ensure program accessibility for handicapped students.	1 2 3 4 5	1 2 3 4 5
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	1 2 3 4 5	1 2 3 4 5
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	1 2 3 4 5	1 2 3 4 5
49. Select, adapt, or develop instructional materials for use with handicapped students.	1 2 3 4 5	1 2 3 4 5
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	1 2 3 4 5	1 2 3 4 5 (31-32)
51. Devise flexible time limits based upon individual rates of progress.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and and cognitive abilities of the student to plan progress.	1 2 3 4 5	1 2 3 4 5
53. Develop an awareness of how to recognize students with learning problems in the regular class.	1 2 3 4 5	1 2 3 4 5
54. Use diagnostic an dprescriptive assessment techniques for planning instruction.	1 2 3 4 5	1 2 3 4 5
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	1 2 3 4 5	1 2 3 4 5
56. Assist in the development of individualized education programs (IEP) for handicapped students.	1 2 3 4 5	1 2 3 4 5
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	1 2 3 4 5	1 2 3 4 5
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	1 2 3 4 5	1 2 3 4 5
59. Develop behavior observation skills concerning handicapped students.	1 2 3 4 5	1 2 3 4 5
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	1 2 3 4 5	1 2 3 4 5 (51-52)

STUDENT ORGANIZATIONS

62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	1 2 3 4 5	1 2 3 4 5
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	1 2 3 4 5	1 2 3 4 5
64. Prepare handicapped students for leadership roles in student vocational organizations.	1 2 3 4 5	1 2 3 4 5 (59-60)
65. Provide handicapped students with opportunities for a wide range of social experiences through vocationalstudent organizations.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
PROFESSIONAL ROLE AND DEVELOPMENT		(61-62)
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	1 2 3 4 5	1 2 3 4 5
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	1 2 3 4 5	1 2 3 4 5
68. Knowledge of appropriate referral sources for handicapped students.	1 2 3 4 5	1 2 3 4 5
STUDENT GUIDANCE		
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	1 2 3 4 5	1 2 3 4 5
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	1 2 3 4 5	1 2 3 4 5
71. Knowledge of behavior modification techniques concerning handicapped students.	1 2 3 4 5	1 2 3 4 5
72. Knowledge of suitable job placement for handicapped students.	1 2 3 4 5	1 2 3 4 5
SCHOOL/COMMUNITY RELATIONS		(75-76)
73. Career opportunities for the handicapped student.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
INSTRUCTIONAL IMPLEMENTATION		(77-78)
74. Machinery, tool and physical facility modifications for handicapped students.	1 2 3 4 5	1 2 3 4 5 [2] (80)
75. Methods and procedures to utilize resource personnel related to handicapped students.	1 2 3 4 5	(5-6) 1 2 3 4 5
76. Physical and sensory limitations of handicapped persons.	1 2 3 4 5	1 2 3 4 5
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	1 2 3 4 5	1 2 3 4 5
78. Procedures to modify jobs.	1 2 3 4 5	1 2 3 4 5
PROGRAM MANAGEMENT		
79. Related services to provide the total quality aspects of a program for handicapped students.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL PLANNING		
80. Appropriate expectations for the performance of handicapped persons.	1 2 3 4 5	1 2 3 4 5
81. Methods and procedures to identify needs and interests of handicapped students.	1 2 3 4 5	1 2 3 4 5 (19-20)
82. Learner selection of criteria to assure accessibility of handicapped students.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
		(21-22)
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	1 2 3 4 5	1 2 3 4 5
84. How to cluster and sequence related tasks according to individual handicapped. student's abilities and needs.	1 2 3 4 5	1 2 3 4 5
85. Devising flexible time limits based upon individual rates of progress.	1 2 3 4 5	1 2 3 4 5
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	1 2 3 4 5	1 2 3 4 5
87. How to recognize students with learning problems in regular class.	1 2 3 4 5	1 2 3 4 5
88. Individualized education plan (IEP) for handicapped students.	1 2 3 4 5	1 2 3 4 5
89. Job requirements in occupations applicable to the handicapped.	1 2 3 4 5	1 2 3 4 5
90. Differing capabilities of handicapped students relative to the severity of their disability.	1 2 3 4 5	1 2 3 4 5
		(37-38)
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
		(39-40)
92. Causes for and results of low self-esteem for a handicapped individual.	1 2 3 4 5	1 2 3 4 5
EVALUATION		
93. Behavior observation skills for handicapped students.	1 2 3 4 5	1 2 3 4 5
STUDENT ORGANIZATION		
94. How to integrate and actively involve handicapped students into student vocational organizations.	1 2 3 4 5	1 2 3 4 5
95. Leadership roles for handicapped students in vocational organizations.	1 2 3 4 5	1 2 3 4 5 (47-48
96. Role and importance of student organizations in the development of handicapped persons.	1 2 3 4 5	1 2 3 4 5 [3] (80)

Appendix B

Needs Assessment Survey of Vocational Teacher Educators

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT NEEDS FOR WORKING WITH THE HANDICAPPED

Needs Assessment Survey of Vocational Teacher Educators

INSTRUCTIONS

This survey is conducted under contract number 300800865 with the Office of Vocational and Adult Education, United States Department of Education, by Educational Innovators, Inc., of Richardson, Texas.

Attached is a list of competency and knowledge statements that are needed for vocational teachers who instruct handicapped students. You are asked to identify the extent the competencies and knowledges are presently developed with the vocational teacher education program by circling a number on a scale from one (low) to five (high).

(1) For example, if in your present program, the development of the competency or knowledge statement listed is low, indicate by circling one:

(1)	2	3	4	5
low				high

If your present program, however, includes a high degree of development of the competency or knowledge statement , this should be indicated by circling five:

1	2	3	4	(5)
low				high

Circling number three would indicate an average development of the competency or knowledge; circling any other number (two or four) would indicate decreasing or increasing developmental levels of the competency or knowledge.

(2) In addition, please indicate the desired level of development for each competency or knowledge which in your opinion should be achieved by your students in your vocational teacher education program by circling a number on a scale from one (low) to five (high) for each competency or knowledge. For your information, the numbers in the right hand margin are keypunch numbers.

The success of this survey depends upon your cooperation. Please respond to every statement; be certain to make only one response for columns one and two. For your convenience, a self-addressed, stamped envelope is enclosed for returning the questionnaire which needs to be received by January 16, 1981. This report is authorized by law (20U.S.C.-2401). While you are not required to respond, your cooperation is needed to make the results of this study comprehensive, accurate, and timely.

Thank you for your assistance.

Personnel Training Requirements to Serve Handicapped Populations
Needs Assessment Survey of Vocational Teacher Educators

(1-3) □□□

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
PROFESSIONAL ROLE AND DEVELOPMENT		(5-6)
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	1 2 3 4 5	1 2 3 4 5
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	1 2 3 4 5	1 2 3 4 5
3. Use and supervise service personnel in providing vocational training for handicapped persons.	1 2 3 4 5	1 2 3 4 5
4. Identify and participate in professional organizations concerned with handicapped persons.	1 2 3 4 5	1 2 3 4 5
5. Maintain ethical and legal standards appropriate for working with handicapped students.	1 2 3 4 5	1 2 3 4 5
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	1 2 3 4 5	1 2 3 4 5
		(17-18)
7. Communicate effectively with other professionals to solve problems of the handicapped student.	1 2 3 4 5	1 2 3 4 5
8. Refer students with special problems to appropriate sources.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
		(21-22)
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	1 2 3 4 5	1 2 3 4 5
STUDENT GUIDANCE		
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	1 2 3 4 5	1 2 3 4 5
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	1 2 3 4 5	1 2 3 4 5
12. Advise and counsel handicapped persons relative to personal and professional goals.	1 2 3 4 5	1 2 3 4 5
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	1 2 3 4 5	1 2 3 4 5
14. Interpret occupational tests and inventories to students.	1 2 3 4 5	1 2 3 4 5
15. Develop two-way communication during conferences with handicapped students.	1 2 3 4 5	1 2 3 4 5
16. Assist handicapped students in developing good study habits related to vocational training.	1 2 3 4 5	1 2 3 4 5
		(37-38)
17. Conduct a purposeful home and community visit for each handicapped student.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
		(39-40)
18. Assess the ability of the handicapped individual to modify his/her behavior.	1 2 3 4 5	1 2 3 4 5
19. Assist in developing suitable job placement for handicapped students.	1 2 3 4 5	1 2 3 4 5
20. Assist each handicapped student to develop and maintain a positive self-concept.	1 2 3 4 5	1 2 3 4 5
SCHOOL/COMMUNITY RELATIONS		
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	1 2 3 4 5	1 2 3 4 5
22. Identify and provide orientation for potential employers of handicapped students.	1 2 3 4 5	1 2 3 4 5
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	1 2 3 4 5	1 2 3 4 5
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL IMPLEMENTATION		(53-54)
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High (55-56)
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	1 2 3 4 5	1 2 3 4 5
27. Apply individual instructional prescription to all handicapped pupils in class.	1 2 3 4 5	1 2 3 4 5
28. Use the basic principles of learning theory and behavior modification related to vocational instruction for the handicapped.	1 2 3 4 5	1 2 3 4 5
29. Interact positively and naturally with the handicapped student.	1 2 3 4 5	1 2 3 4 5
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	1 2 3 4 5	1 2 3 4 5
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	1 2 3 4 5	1 2 3 4 5
32. Modify instructional materials and equipment for individual handicapped learner's needs.	1 2 3 4 5	1 2 3 4 5
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	1 2 3 4 5	1 2 3 4 5 (71-72)
34. Select cooperative training stations for individual handicapped learners.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	1 2 3 4 5	1 2 3 4 5 (77-78)
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	1 2 3 4 5	1 2 3 4 5 [1] (80)
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	1 2 3 4 5	1 2 3 4 5 (5-6)
38. Revise methods of performing tasks.	1 2 3 4 5	1 2 3 4 5
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	1 2 3 4 5	1 2 3 4 5
PROGRAM MANAGEMENT		
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	1 2 3 4 5	1 2 3 4 5
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL PLANNING		(13-14)
42. Assist in a long-range plan for integrating the handicapped student into the vocational instructional program.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	1 2 3 4 5	1 2 3 4 5
44. Identify needs and interests of the handicapped student.	1 2 3 4 5	1 2 3 4 5
45. Conduct parent/teacher conferences for planning instructional programs.	1 2 3 4 5	1 2 3 4 5
46. Revise selection criteria to ensure program accessibility for handicapped students.	1 2 3 4 5	1 2 3 4 5
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	1 2 3 4 5	1 2 3 4 5
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	1 2 3 4 5	1 2 3 4 5
49. Select, adapt, or develop instructional materials for use with handicapped students.	1 2 3 4 5	1 2 3 4 5
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	1 2 3 4 5	1 2 3 4 5
51. Devise flexible time units based upon individual rates of progress.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and and cognitive abilities of the student to plan progress.	1 2 3 4 5	1 2 3 4 5
53. Develop an awareness of how to recognize students with learning problems in the regular class.	1 2 3 4 5	1 2 3 4 5
54. Use diagnostic an dprescriptive assessment techniques for planning instruction.	1 2 3 4 5	1 2 3 4 5
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	1 2 3 4 5	1 2 3 4 5
56. Assist in the development of individualized education programs (IEP) for handicapped students.	1 2 3 4 5	1 2 3 4 5
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	1 2 3 4 5	1 2 3 4 5
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	1 2 3 4 5	1 2 3 4 5
59. Develop behavior observation skills concerning handicapped students.	1 2 3 4 5	1 2 3 4 5
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students. (51-52)	1 2 3 4 5	1 2 3 4 5
STUDENT ORGANIZATIONS		
62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	1 2 3 4 5	1 2 3 4 5
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	1 2 3 4 5	1 2 3 4 5
64. Prepare handicapped students for leadership roles in student vocational organizations. (59-60)	1 2 3 4 5	1 2 3 4 5
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
PROFESSIONAL ROLE AND DEVELOPMENT		(61-62)
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	1 2 3 4 5	1 2 3 4 5
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	1 2 3 4 5	1 2 3 4 5
68. Knowledge of appropriate referral sources for handicapped students.	1 2 3 4 5	1 2 3 4 5
STUDENT GUIDANCE		
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	1 2 3 4 5	1 2 3 4 5
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	1 2 3 4 5	1 2 3 4 5
71. Knowledge of behavior modification techniques concerning handicapped students.	1 2 3 4 5	1 2 3 4 5
72. Knowledge of suitable job placement for handicapped students.	1 2 3 4 5	1 2 3 4 5
SCHOOL/COMMUNITY RELATIONS		(75-76)
73. Career opportunities for the handicapped student.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
INSTRUCTIONAL IMPLEMENTATION		(77-78)
74. Machinery, tool and physical facility modifications for handicapped students.	1 2 3 4 5	1 2 3 4 5 [2] (80)
75. Methods and procedures to utilize resource personnel related to handicapped students.	1 2 3 4 5	(5-6) 1 2 3 4 5
76. Physical and sensory limitations of handicapped persons.	1 2 3 4 5	1 2 3 4 5
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	1 2 3 4 5	1 2 3 4 5
78. Procedures to modify jobs.	1 2 3 4 5	1 2 3 4 5
PROGRAM MANAGEMENT		
79. Related services to provide the total quality aspects of a program for handicapped students.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL PLANNING		
80. Appropriate expectations for the performance of handicapped persons.	1 2 3 4 5	1 2 3 4 5
81. Methods and procedures to identify needs and interests of handicapped students.	1 2 3 4 5	1 2 3 4 5 (19-20)
82. Learner selection of criteria to assure accessibility of handicapped students.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
		(21-22)
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	1 2 3 4 5	1 2 3 4 5
84. How to cluster and sequence related tasks according to individual handicapped. student's abilities and needs.	1 2 3 4 5	1 2 3 4 5
85. Devising flexible time limits based upon individual rates of progress.	1 2 3 4 5	1 2 3 4 5
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	1 2 3 4 5	1 2 3 4 5
87. How to recognize students with learning problems in regular class.	1 2 3 4 5	1 2 3 4 5
88. Individualized education plan (IEP) for handicapped students.	1 2 3 4 5	1 2 3 4 5
89. Job requirements in occupations applicable to the handicapped.	1 2 3 4 5	1 2 3 4 5
90. Differing capabilities of handicapped students relative to the severity of their disability.	1 2 3 4 5	1 2 3 4 5
		(37-38)
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
		(39-40)
92. Causes for and results of low self-esteem for a handicapped individual.	1 2 3 4 5	1 2 3 4 5
EVALUATION		
93. Behavior observation skills for handicapped students.	1 2 3 4 5	1 2 3 4 5
STUDENT ORGANIZATION		
94. How to integrate and actively involve handicapped students into student vocational organizations.	1 2 3 4 5	1 2 3 4 5
95. Leadership roles for handicapped students in vocational organizations.	1 2 3 4 5	1 2 3 4 5 (47-48)
96. Role and importance of student organizations in the development of handicapped persons.	1 2 3 4 5	1 2 3 4 5 3 (80)

Appendix C

Needs Assessment Survey of Vocational Administrators

Personnel Training Requirements To Serve Handicapped Populations

Needs Assessment Survey of Vocational Administrators

INSTRUCTIONS

This survey is conducted under contract number 300780571 with the Bureau of of Occupational and Adult Education, United States Office of Education, by Educational Personnel Development Consortium for Northeast Texas.

Attached is a list of competency and knowledge statements that are needed for vocational teachers who instruct handicapped students. You are asked to identify the present level of competency or knowledge development of the vocational teachers you supervise by circling a number on a scale from one (low) to five (high).

(1) For example, if the vocational teachers you supervise presently have a low level of competency or knowledge development indicate by circling one:

(1) 2 3 4 5
low high

If the vocational teachers you supervise, however, presently have a high level of competency or knowledge development indicate by circling five:

1 2 3 4 (5)
low high

Circling number three would indicate an average development of the competency or knowledge; circling any other number (two or four) would indicate decreasing or increasing developmental levels of the competency or knowledge.

(2) In addition, please indicate the desired level of development for each competency or knowledge which in your opinion should be achieved by the vocational teachers you supervise by circling a number on a scale from one (low) to five (high) for each competency or knowledge. For your information, the numbers in the right hand margin are keypunch numbers.

The success of this survey depends upon your cooperation. Please respond to every statement; be certain to make only one response for columns one and two. For your convenience, a self-addressed, stamped envelope is enclosed for returning the questionnaire which needs to be received by _____.

Thank you for your assistance.

Personnel Training Requirements to Serve Handicapped Populations
Needs Assessment Survey of Vocational Administrators

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
PROFESSIONAL ROLE AND DEVELOPMENT		
1. Identify types of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	1 2 3 4 5	1 2 3 4 5
2. Make basic recommendations to ensure the accessibility and safety of a facility for handicapped persons.	1 2 3 4 5	1 2 3 4 5
3. Use and supervise support service personnel in providing vocational training for handicapped persons.	1 2 3 4 5	1 2 3 4 5
4. Identify and participate in professional organizations concerned with handicapped persons.	1 2 3 4 5	1 2 3 4 5
5. Maintain ethical and legal standards appropriate for working with handicapped students.	1 2 3 4 5	1 2 3 4 5
6. Analyze personal and professional abilities and limitations in providing instruction to handicapped persons.	1 2 3 4 5	1 2 3 4 5
7. Communicate effectively with other professionals to solve problems of the handicapped student.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
		(21-22)
9. Assist handicapped students in developing social, physical, and emotional security needed for obtaining and maintaining future employment.	1 2 3 4 5	1 2 3 4 5
STUDENT GUIDANCE		
10. Assist the handicapped student in viewing his/her assets and limitations realistically.	1 2 3 4 5	1 2 3 4 5
11. Assist in identifying school vocational education purposes and goals for the handicapped student.	1 2 3 4 5	1 2 3 4 5
12. Advise and counsel handicapped persons relative to personal and professional goals.	1 2 3 4 5	1 2 3 4 5
13. Counsel parents/guardians of handicapped students regarding their child's vocational education and career plans.	1 2 3 4 5	1 2 3 4 5
14. Interpret occupational tests and inventories to students.	1 2 3 4 5	1 2 3 4 5
15. Develop two-way communication during conferences with handicapped students.	1 2 3 4 5	1 2 3 4 5
16. Assist handicapped students in developing good study habits related to vocational training.	1 2 3 4 5	1 2 3 4 5
		(37-38)
17. Conduct a purposeful home and community visit for each handicapped student.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
		(39-40)
18. Assess the ability of the handicapped individual to modify his/her behavior.	1 2 3 4 5	1 2 3 4 5
19. Assist in developing suitable job placement for handicapped students.	1 2 3 4 5	1 2 3 4 5
20. Assist each handicapped student to develop and maintain a positive self-concept.	1 2 3 4 5	1 2 3 4 5
SCHOOL/COMMUNITY RELATIONS		
21. Assist parents and other teachers in interpreting vocational programs and services for the handicapped student.	1 2 3 4 5	1 2 3 4 5
22. Identify and provide orientation for potential employers of handicapped students.	1 2 3 4 5	1 2 3 4 5
23. Cooperate with appropriate agencies and groups in identifying career opportunities for the handicapped student.	1 2 3 4 5	1 2 3 4 5
24. Influence attitudes of regular school personnel and nonhandicapped students toward acceptance of handicapped students.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL IMPLEMENTATION		(53-54)
25. Utilize a variety of teaching methods and techniques to provide instruction for the handicapped students.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High (53-56)
26. Demonstrate objectivity and sensitivity to cultural differences of handicapped students.	1 2 3 4 5	1 2 3 4 5
27. Apply individual instructional prescription to all handicapped pupils in class.	1 2 3 4 5	1 2 3 4 5
28. Use the basic principles of learning theory and behavior modification related to vocational instruction for the handicapped.	1 2 3 4 5	1 2 3 4 5
29. Interact positively and naturally with the handicapped student.	1 2 3 4 5	1 2 3 4
30. Emphasize qualities of initiative, self-reliance, and independence with the handicapped learner.	1 2 3 4 5	1 2 3 5
31. Complete a cooperative training agreement unique to meeting the needs of the individual handicapped.	1 2 3 4 5	1 2 3 4 5
32. Modify instructional materials and equipment for individual handicapped learner's needs.	1 2 3 4 5	1 2 3 4 5
33. Develop a procedure for fulfilling an individual instructional prescription in the classroom and laboratory situation.	1 2 3 4 5	1 2 3 4 5
34. Select cooperative training stations for individual handicapped learners.	1 2 3 4 5	(71-72) 1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High (71-74)
35. Translate statements describing physical and sensory limitations into statements concerning instructional limitations and/or adaptations.	1 2 3 4 5	1 2 3 4 5
36. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	1 2 3 4 5	1 2 3 4 5 (77-78)
37. Provide teaching strategies and delivery systems based upon individual learning styles and abilities of handicapped students.	1 2 3 4 5	1 2 3 4 5 [1] (80)
38. Revise methods of performing tasks.	1 2 3 4 5	(5-6) 1 2 3 4 5
39. Develop appropriate attitudes of nonhandicapped students toward handicapped students.	1 2 3 4 5	1 2 3 4 5
PROGRAM MANAGEMENT		
40. Secure related services for handicapped students necessary to provide the total quality aspects of the program.	1 2 3 4 5	1 2 3 4 5
41. Modify or adapt when necessary the tools, equipment, facilities, or conditions in the learning environment to meet the needs of the handicapped student.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL PLANNING		(13-14)
42. Assist in a long-range plan for integrating the handicapped student into the vocational educational program.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
43. Define appropriate expectations for laboratory and cooperative work performance of handicapped persons.	1 2 3 4 5	1 2 3 4 5
44. Identify needs and interests of the handicapped student.	1 2 3 4 5	1 2 3 4 5
45. Conduct parent/teacher conferences for planning instructional programs.	1 2 3 4 5	1 2 3 4 5
46. Revise selection criteria to ensure program accessibility for handicapped students.	1 2 3 4 5	1 2 3 4 5
47. Develop an integrated program for each handicapped student in cooperation with special education teachers and other school personnel.	1 2 3 4 5	1 2 3 4 5
48. Develop instructional activities by clustering and sequencing related tasks according to individual handicapped students' interests, abilities, and needs.	1 2 3 4 5	1 2 3 4 5
49. Select, adapt, or develop instructional materials for use with handicapped students.	1 2 3 4 5	1 2 3 4 5
50. Develop instructional units revolving around job-specific concepts and skills and the needs and abilities of handicapped students.	1 2 3 4 5	1 2 3 4 5
51. Devise flexible time limits based upon individual rates of progress.	1 2 3 4 5	1 2 3 4 5

(31-32)

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
52. Utilize information obtained from related disciplines about the sensory, physical, emotional, social, and and cognitive abilities of the student to plan progress.	1 2 3 4 5	1 2 3 4 5
53. Develop an awareness of how to recognize students with learning problems in the regular class.	1 2 3 4 5	1 2 3 4 5
54. Use diagnostic an dprescriptive assessment techniques for planning instruction.	1 2 3 4 5	1 2 3 4 5
55. Identify the services needed to increase handicapped students' chances of being successful in regular programs.	1 2 3 4 5	1 2 3 4 5
56. Assist in the development of individualized education programs (IEP) for handicapped students.	1 2 3 4 5	1 2 3 4 5
57. Evaluate a student performance according to the objectives on the individualized education plan (IEP).	1 2 3 4 5	1 2 3 4 5
58. Determine appropriate techniques for evaluating the performance of students with specific handicaps.	1 2 3 4 5	1 2 3 4 5
59. Develop behavior observation skills concerning handicapped students.	1 2 3 4 5	1 2 3 4 5
60. Obtain follow-up information on handicapped students leaving or graduating from school programs.	1 2 3 4 5	1 2 3 4 5

Competency Statement	1. Present level of competency development Low High	2. Desired level of competency development Low High
61. Conduct a comprehensive evaluation of the total vocational program as it relates to the needs of handicapped students.	1 2 3 4 5	(51-52) 1 2 3 4 5

STUDENT ORGANIZATIONS

62. Demonstrate a personal commitment concerning handicapped students' participation in student vocational organizations.	1 2 3 4 5	1 2 3 4 5
63. Integrate and actively involve handicapped students into an ongoing student vocational organization.	1 2 3 4 5	1 2 3 4 5
64. Prepare handicapped students for leadership roles in student vocational organizations.	1 2 3 4 5	1 2 3 4 5
		(59-60)
65. Provide handicapped students with opportunities for a wide range of social experiences through vocational student organizations.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
PROFESSIONAL ROLE AND DEVELOPMENT (61-62)		
66. Knowledge of barriers (i.e., attitudinal, architectural, et cetera) that have inhibited training and employment of handicapped persons.	1 2 3 4 5	1 2 3 4 5
67. Knowledge of ethical and legal standards appropriate for working with handicapped students.	1 2 3 4 5	1 2 3 4 5
68. Knowledge of appropriate referral sources for handicapped students.	1 2 3 4 5	1 2 3 4 5
STUDENT GUIDANCE		
69. Knowledge of interpreting occupational aptitude and ability tests and inventories to students.	1 2 3 4 5	1 2 3 4 5
70. Knowledge of agencies to assist handicapped students such as the health and welfare services, vocational rehabilitation, and mental health department.	1 2 3 4 5	1 2 3 4 5
71. Knowledge of behavior modification techniques concerning handicapped students.	1 2 3 4 5	1 2 3 4 5
72. Knowledge of suitable job placement for handicapped students.	1 2 3 4 5	1 2 3 4 5
SCHOOL/COMMUNITY RELATIONS (75-76)		
73. Career opportunities for the handicapped student.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
INSTRUCTIONAL IMPLEMENTATION		(77-78)
74. Machinery, tool and physical facility modifications for handicapped students.	1 2 3 4 5	1 2 3 4 5 [2] (80)
75. Methods and procedures to utilize resource personnel related to handicapped students.	1 2 3 4 5	(5-6) 1 2 3 4 5
76. Physical and sensory limitations of handicapped persons.	1 2 3 4 5	1 2 3 4 5
77. Procedure to sequence tasks to conform with learning styles, learning pace, and inferred learning potential of handicapped students.	1 2 3 4 5	1 2 3 4 5
78. Procedures to modify jobs.	1 2 3 4 5	1 2 3 4 5
PROGRAM MANAGEMENT		
79. Related services to provide the total quality aspects of a program for handicapped students.	1 2 3 4 5	1 2 3 4 5
INSTRUCTIONAL PLANNING		
80. Appropriate expectations for the performance of handicapped persons.	1 2 3 4 5	1 2 3 4 5
81. Methods and procedures to identify needs and interests of handicapped students.	1 2 3 4 5	1 2 3 4 5 (19-20)
82. Learner selection of criteria to assure accessibility of	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
		(21-22)
83. How to interpret reports of other professionals such as psychological evaluations, audiologists, ophthalmologists, et cetera.	1 2 3 4 5	1 2 3 4 5
84. How to cluster and sequence related tasks according to individual handicapped. student's abilities and needs.	1 2 3 4 5	1 2 3 4 5
85. Devising flexible time limits based upon individual rates of progress.	1 2 3 4 5	1 2 3 4 5
86. Sensory, physical, emotional, social, and cognitive states of handicapped students.	1 2 3 4 5	1 2 3 4 5
87. How to recognize students with learning problems in regular class.	1 2 3 4 5	1 2 3 4 5
88. Individualized education plan (IEP) for handicapped students.	1 2 3 4 5	1 2 3 4 5
89. Job requirements in occupations applicable to the handicapped.	1 2 3 4 5	1 2 3 4 5
90. Differing capabilities of handicapped students relative to the severity of their disability.	1 2 3 4 5	1 2 3 4 5
		(37-38)
91. Federal and State laws concerning vocational education, vocational rehabilitation, and special education.	1 2 3 4 5	1 2 3 4 5

Knowledge Statement	1. Present level of knowledge development Low High	2. Desired level of knowledge development Low High
		(39-40)
92. Causes for and results of low self-esteem for a handicapped individual.	1 2 3 4 5	1 2 3 4 5
EVALUATION		
93. Behavior observation skills for handicapped students.	1 2 3 4 5	1 2 3 4 5
STUDENT ORGANIZATION		
94. How to integrate and actively involve handicapped students into student vocational organizations.	1 2 3 4 5	1 2 3 4 5
95. Leadership roles for handicapped students in vocational organizations.	1 2 3 4 5	1 2 3 4 5 (47-48)
96. Role and importance of student organizations in the development of handicapped persons.	1 2 3 4 5	1 2 3 4 5 [3] (80)